

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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MASON VALLEY, HYDROGRAPHIC BASIN 9-108

GROUNDWATER PUMPAGE INVENTORY

CALENDAR YEAR 2011

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ABSTRACT

This inventory represents the status and use of permitted, certificated and claims of vested right (vested claims) groundwater rights located within Mason Valley, Hydrographic Basin 9-108, for calendar year 2011. Also included for summary purposes are graphs and data associated with this use, and yearly totals of historical groundwater use from 1994 through 2010 by manner of use.

The data presented are valid for the time period of this report and may vary from previously published figures as water rights within the basin are subject to administrative action, such as certification, cancellation, forfeiture or withdrawal on a continual basis.

For calendar year 2011, the permitted, certificated, and vested claims of groundwater rights totaled 146,141 acre-feet. An estimated **53,393 acre-feet** were pumped during the calendar year. This figure includes an estimated 814 acre-feet pumped from exempt domestic wells.

Irrigation is the largest manner of use within the basin. For calendar year 2011, appropriations for irrigation totaled 116,454 acre-feet. Pumpage for the 2011 calendar year for irrigation was approximately 38,685 acre-feet. The next largest categories of use were recreation and industrial, with groundwater rights totaling 6,035 acre-feet (approximately 5,536 acre feet pumped) and 6,835 acre-feet (approximately 4,253 acre feet pumped), respectively.

HYDROGRAPHIC BASIN SUMMARY

HYDROGRAPHIC BASIN NUMBER	108, REGION 9	
HYDROGRAPHIC BASIN NAME	MASON VALLEY	
COUNTIES	LYON, MINERAL	
MAJOR COMMUNITIES	YERINGTON, MASON, WEED HEIGHTS	
DESIGNATED	YES	
DENIALS BASED UPON WATER AVAILABILITY	ALL USES EXCEPT COMMERCIAL, INDUSTRIAL & STOCKWATER LESS THAN 2.0 ACRE-FEET ANNUALLY	
GROUNDWATER LEVEL MEASUREMENTS	NDWR & USGS	
PUMPAGE INVENTORY, ACRE-FEET IN 2011	53,393 ¹	
STATE ENGINEER'S ORDERS		
<u>NO. 627 – DESIGNATION</u>	DATE: JANUARY, 20, 1977	
<u>NO. 691 – AMENDED DESIGNATION</u>	DATE: SEPTEMBER 7, 1977	
<u>NO. 1125 – NOTICE OF CURTAILMENT</u>	DATE: FEBRUARY 4, 1997	
<u>NO. 1158 – INSTALLATION OF TOTALIZING METERS</u>	DATE: FEBRUARY 1, 2000	
COMMITTED GROUNDWATER RESOURCE: 146,141.29 ACRE-FEET ²	DATE: DECEMBER 2011	
COMMERCIAL.....410.15	DOMESTIC.....17.05	ENVIRONMENTAL.....218.85
INDUSTRIAL.....6,834.81	IRRIGATION.....116,453.69	MINING & MILLING.....9,370.29
MUNICIPAL.....5,625.86	QUASI-MUNICIPAL..709.12	RECREATION.....6,035.40
STOCKWATER.....357.47	WILDLIFE.....108.60	

NOTE: Committed groundwater resource data are accurate for December 2011. Manner of use category totals vary over time, as rights are not necessarily static. Rights may be subject to change applications, certification, withdrawals, forfeiture and cancellations; each of these circumstances could impact the duty, diversion rate and acreage associated with a given right. The value associated with each manner of use category does not include those portions that have been relinquished in support of domestic wells. A total of 34.24 acre-feet have been relinquished in the basin.

¹ Includes pumpage by exempt domestic wells, as defined by NRS 534.013. The domestic use estimate is based upon a count of the total domestic wells in the basin multiplied by one acre-foot per annum. The number of domestic wells in the basin was estimated by a query of the Nevada Division of Water Resources' Well Log Database and is approximately 814.

² Includes underground and other groundwater; does not include geothermal water.

PURPOSE AND SCOPE

The purpose of this report is to inventory all of the groundwater resources allocated and described by the Office of the State Engineer, Nevada Division of Water Resources (NDWR), and to estimate the amount of groundwater pumped within the Mason Valley Hydrographic Basin 9-108, for the calendar year beginning January 1, 2011 and ending December 31, 2011. This report estimates the amount of groundwater pumped under the permits and certificates issued by the State Engineer, and the vested claims to groundwater, as well as the amount pumped by exempt domestic wells within the basin.

DESCRIPTION OF THE STUDY AREA

Mason Valley is located in west central Nevada. This basin occupies approximately 510 square miles in Lyon County, and a small portion of Mineral County. The adjacent hydrographic basins are Smith Valley (9-107) to the west, Churchill Valley (8 -102) to the north, and Walker Lake Valley, Shurz Sub-Area (9-110A) to the east, and East Walker Area (9-109) to the south (see Figure 1). The exterior boundary of the Mason Valley Hydrographic Basin 9-108 is as described by Designation Order 627 issued by the Nevada State Engineer dated January 20, 1977, and amended by Order 691 dated September 7, 1977.

Mason Valley is bounded on the east by the Wassuk Range that rises to elevations greater than 11,000 feet, on the west by the Singatse Range, rising to elevations greater than 6,500 feet, on the south by the Pine Grove Hills, rising to elevations greater than 9,000 feet, and on the north the Desert Mountains, rising to elevations greater than 6,500 feet. (all elevations in this text are above mean sea level).

HYDROLOGY

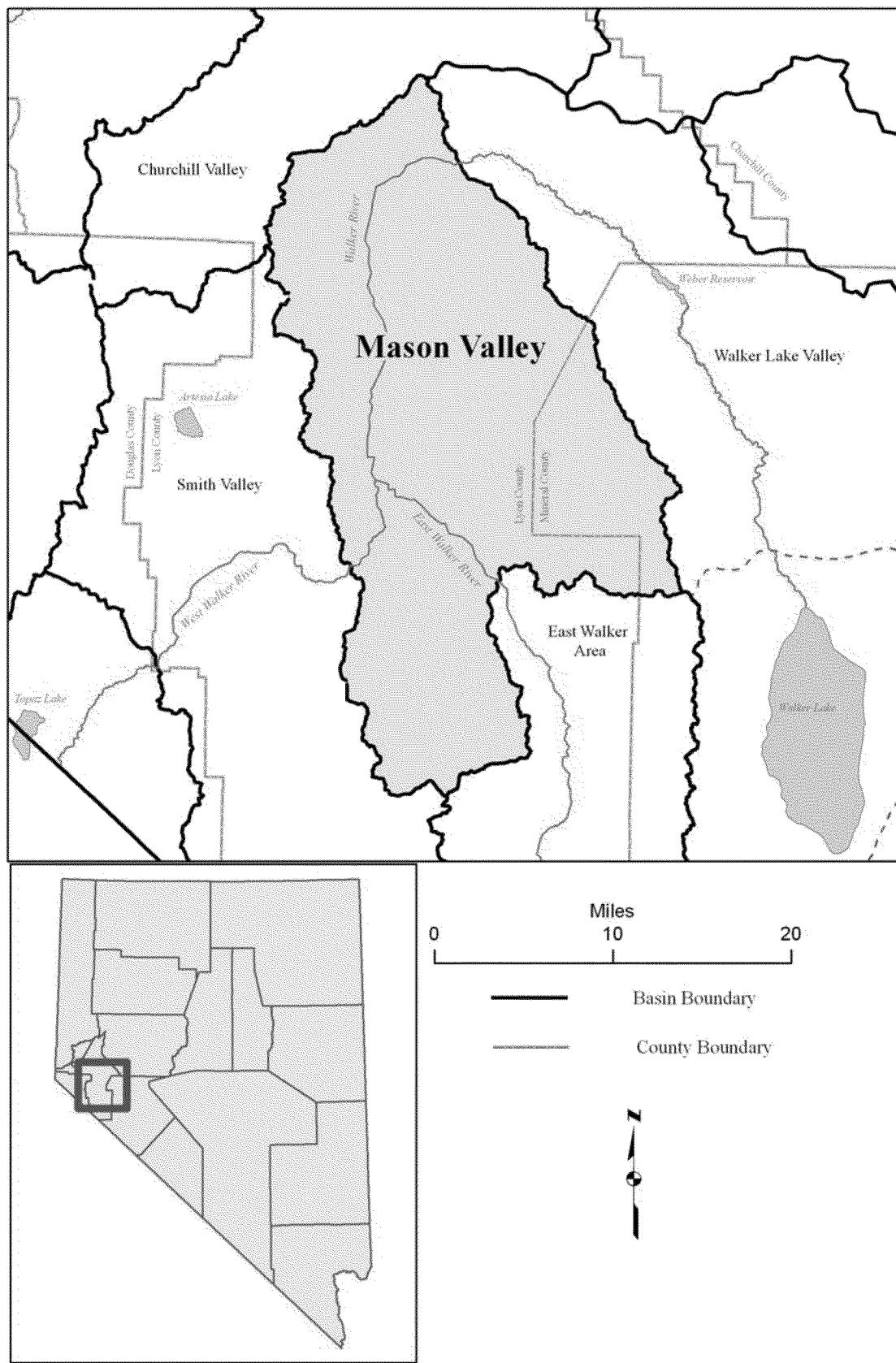
The dominant hydrologic features of Mason Valley are the West Fork of the Walker River, the East Fork of the Walker River, and the main stem of the Walker River. The confluence of the East and West Forks of the Walker River occurs on the west side of the valley approximately six miles south of Yerington.

The U.S. Geological Survey (USGS) operates two streamflow gaging stations near the locations at which the West and East Walker Rivers enter Mason Valley, they are stations #10300000 and #10293500 respectively; the USGS also operates gaging station #10301500 on the Walker River near the location at which the Walker River exits the basin.

The annual total run-off for USGS site #10300000 (West Walker River near Hudson, NV) during calendar year 2011 was 249,261³ acre-feet; the annual total flow for USGS site #10293500 (East Walker River above Strosnider ditch near Mason, NV) during calendar year 2011 was 202,596³ acre-feet. Where the river exits Mason Valley, at USGS site #10301500 (Walker River near Wabuska, NV), the total annual flow during calendar year 2011 was 244,178³ acre-feet.

³ This volumetric total was calculated by the Nevada Division of Water Resources using data provided by the USGS, including a portion that was provisional and subject to revision.

Figure 1. Location Map of Mason Valley Groundwater Basin 9-108



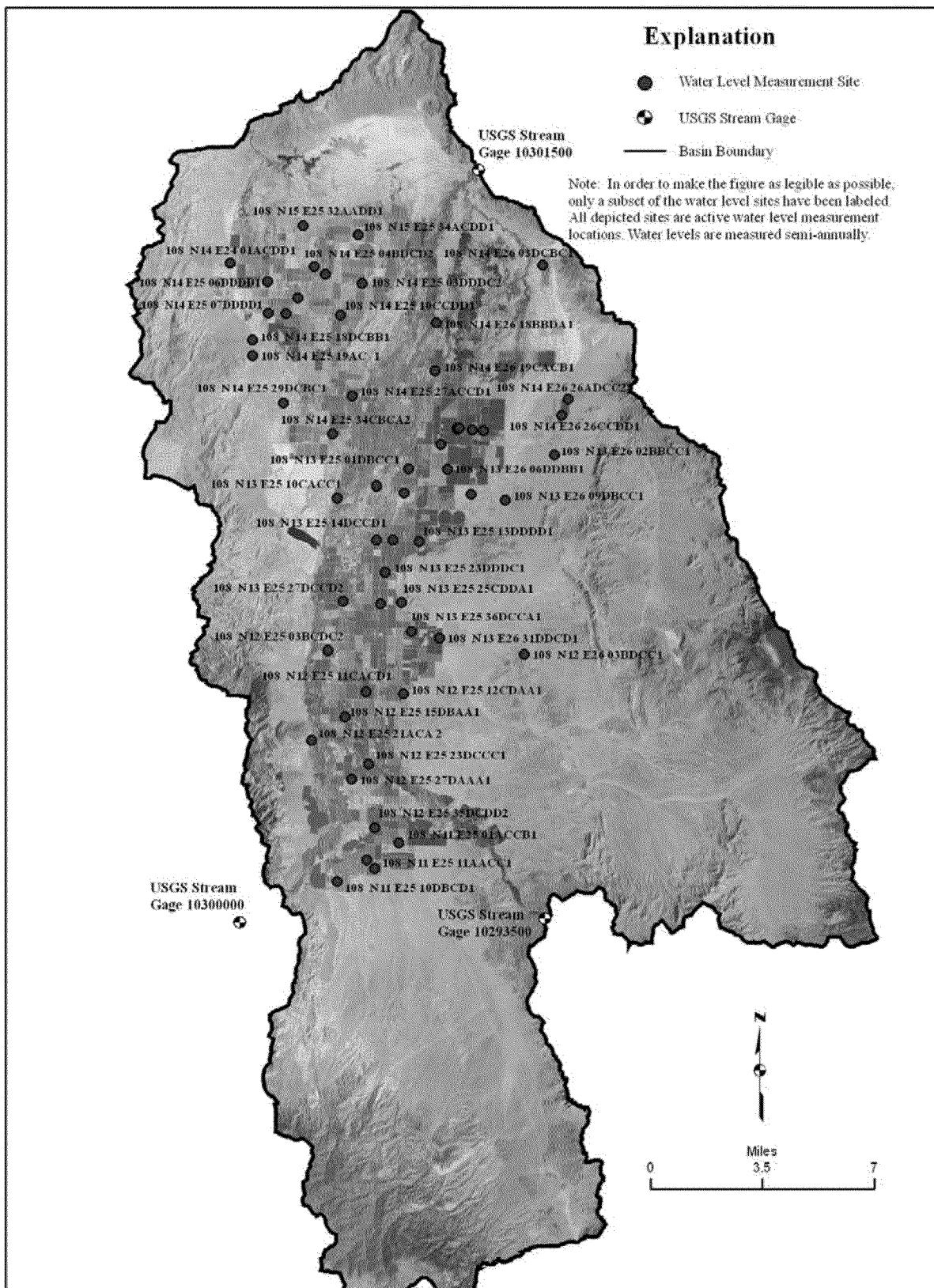
GROUNDWATER LEVELS

A groundwater level monitoring network was instituted as part of the fieldwork done for the inventory. The network consists of 58 sites with the following site names (see Figure 2):

- 108 N11 E25 01ACCB1
- 108 N11 E25 02CDDD1
- 108 N11 E25 10DBCD1
- 108 N11 E25 11AAC1
- 108 N12 E25 03BCDC2
- 108 N12 E25 11CACD1
- 108 N12 E25 12CDA1
- 108 N12 E25 15DBAA2
- 108 N12 E25 21ACA 2
- 108 N12 E25 23DCCC1
- 108 N12 E25 27DAAA1
- 108 N12 E25 35DCDD2
- 108 N12 E26 03BDCC1
- 108 N13 E25 01DBCC1
- 108 N13 E25 10CACC1
- 108 N13 E25 11ACBD1
- 108 N13 E25 11ACBD2
- 108 N13 E25 12BDDC1
- 108 N13 E25 13CCCD1
- 108 N13 E25 13DDDD1
- 108 N13 E25 14DCCD1
- 108 N13 E25 23DDDC1
- 108 N13 E25 25CDDA2
- 108 N13 E25 26DDCC1
- 108 N13 E25 27DCCD2
- 108 N13 E25 36DCCA2
- 108 N13 E26 02BBCC1
- 108 N13 E26 06DDBB2
- 108 N13 E26 08CACA1
- 108 N13 E26 09DBCC1
- 108 N13 E26 31DDCD1
- 108 N14 E24 01ACDD1
- 108 N14 E25 03DDDC2
- 108 N14 E25 04BDCD2
- 108 N14 E25 04DACC1
- 108 N14 E25 06DDDD1
- 108 N14 E25 07DDDD1
- 108 N14 E25 08ADDC1
- 108 N14 E25 08DCCC1
- 108 N14 E25 10CCDD1
- 108 N14 E25 18DCBB1
- 108 N14 E25 19AC 1
- 108 N14 E25 27ACCD1
- 108 N14 E25 29DCBC1
- 108 N14 E25 34CBCA2
- 108 N14 E26 03DCBC1
- 108 N14 E26 18BBDA1
- 108 N14 E26 19CACB1
- 108 N14 E26 26ADCC2
- 108 N14 E26 26CCDD1
- 108 N14 E26 31DCCC2
- 108 N14 E26 32ADCA2
- 108 N14 E26 32BCCC1
- 108 N14 E26 32BCCC2
- 108 N14 E26 32BCCC3
- 108 N14 E26 32BDDD1
- 108 N15 E25 32AADD3
- 108 N15 E25 34ACDD1

The water level data and hydrograph for each site are available from the Water Level Data page of the Nevada Division of Water Resources website (<http://water.nv.gov/data/waterlevel/>). Data retrievals are organized by hydrographic basin. In addition to the sites monitored by the Nevada Division of Water Resources, the USGS monitors a network of wells whose data are available directly from the USGS, or from their website, <http://nevada.usgs.gov>

Figure 2. Location Map of Mason Valley Groundwater Level Monitoring Network



METHODS TO ESTIMATE PUMPAGE

This report estimates the amount of groundwater pumped under vested claims, permits and certificates issued by the State Engineer, as well as the amount pumped by the exempt domestic wells in the valley. The following methods were used to arrive at the estimated use:

- Where totalizing meters were in place, meter readings were taken and compared with previous data (if available).
- Where totalizing meter readings resulted in inconsistent and/or ambiguous totals, and manner of use was irrigation, and pumpage had previously been estimated, use was estimated by taking the number of kilowatt-hours used per year, and multiplying that by a calculated ratio of acre-feet per kilowatt hours.
- Where meters were not present, and previous data were not available and the manner of use was not irrigation, pumpage was estimated by applying the annual duty associated with the certificate or permit, if the use was as described in the certificate or permit. If the water was not used as described in the certificate, permit or claim, a value was estimated based upon the circumstances of the actual use for the subject year.
- If there was no use of the water, zero use was recorded.
- Where water right owners are obliged to provide the Office of the State Engineer with monthly pumping totals as a condition of their permits, these reports are verified with occasional meter readings taken by NDWR staff and used as the amount pumped.
- Exempt domestic wells do not require a permit issued by the State Engineer. These domestic wells may be drilled and utilized where water service from a purveyor is not available. These types of wells do not require a permit from the State Engineer as provided by Nevada Revised Statutes (NRS) 534.180. NRS 534.013 defines this category of domestic use as follows: "*Domestic use or domestic purposes extends to culinary and household purposes directly related to a single family dwelling, including, without limitation, the watering of a family garden and lawn and the watering of livestock and any other domestic animals or household pets.*" The number of exempt domestic wells in the basin was determined by a query of the Nevada Division of Water Resource Well Log Database. By statute, domestic wells are allowed to pump two acre-feet annually, however, the amount of water pumped by exempt domestic wells is estimated to be one acre-foot per well.
- Within the Mason Valley Hydrographic Basin, there are seven permitted domestic water rights, some serving multiple dwellings. If the wells were drilled and noted in the Well Log Database as a domestic well, the estimated use is included with the exempt domestic wells. If there are additional dwellings served by these wells, these additional dwellings were estimated to be one acre-foot annually each within this report. If the well was drilled and noted in the Well Log Database as something other than domestic, or if the well log was not found, pumpage was estimated to be one acre-foot annually for each dwelling within this report.

PUMPAGE BY MANNER OF USE

Note that all data herein are estimates and subject to revision.

The total estimated groundwater pumpage for the calendar year 2011 was **53,393 acre-feet**. The annual duties of permitted, certificated and claims of vested groundwater rights within the Mason Valley Hydrographic Basin total approximately **146,141 acre-feet**. This value does not include those portions of rights that have been relinquished in support of domestic wells. The permitted and pumped totals, categorized by manner of use, are as follows:

A. Commercial (COM)

During calendar year 2011, appropriations for commercial purposes totaled 410.15 acre-feet. An estimated 757 acre-feet were pumped during calendar year 2011.

B. Domestic (DOM)

During calendar year 2011, appropriations for domestic purposes totaled 17.05 acre-feet; an estimated five acre-feet were pumped under these rights during calendar year 2011. However, records of the State Engineer indicate approximately 814 domestic wells existed in the basin during calendar year 2011. The amount of water pumped for domestic use as described under NRS 534.013 is estimated at 814 acre-feet. Total domestic use is estimated at 819 acre-feet.

C. Environmental (ENV)

During the calendar year 2011, appropriations for environmental purposes totaled 218.85 acre-feet. An estimated zero acre-feet were pumped during calendar year 2011.

D. Industrial (IND)

During the calendar year 2011, appropriations for industrial purposes totaled 6,834.81 acre-feet. An estimated 4,253 acre-feet were pumped during calendar year 2011.

E. Irrigation (IRR)

During calendar year 2011, appropriations for irrigation purposes in the basin totaled 116,453.69 acre-feet, with an estimated 38,685 acre-feet pumped.

F. Mining & Milling and Mining, Milling & Dewatering (MM & MMD)

During the calendar year 2011, appropriations for mining & milling and mining, milling & dewatering purposes totaled 9,370.29 acre-feet. An estimated 1,018 acre-feet were pumped during calendar year 2011.

G. Municipal (MUN)

During calendar year 2011, appropriations for municipal purposes totaled 5,625.86 acre-feet. During calendar year 2011, an estimated 1,375 acre-feet were pumped.

H. Quasi-Municipal (QM)

During calendar year 2011, appropriations for quasi-municipal purposes totaled 709.12 acre-feet. During calendar year 2011, an estimated 787 acre-feet were pumped.

I. Recreation (REC)

During calendar year 2011, appropriations for recreational purposes totaled 6,035.40 acre-feet. An estimated 5,536 acre-feet were pumped during calendar year 2011.

J. Stockwater (STK)

During the calendar year 2011, appropriations for stockwater purposes totaled 357.47 acre-feet. An estimated 54 acre-feet were pumped during calendar year 2011.

K. Wildlife (WLD)

During the calendar year 2011, appropriations for Wildlife purposes totaled 108.60 acre-feet. An estimated 109 acre-feet were pumped during calendar year 2011.

REFERENCES CITED

Department of the Interior, U.S. Geological Survey. Water-Data Report WDR-US-2011. 15 March 2011. (<http://wdr.water.usgs.gov/wy2011/search.jsp>.)

Nevada Division of Water Resources, (Online).
<http://water.nv.gov>

United States Department of the Interior, Geologic Survey. *Water Resources Bulletin No. 38: Water Resources and Development in Mason Valley, Lyon and Mineral Counties, Nevada 1948-65; C. J. Huxel, Jr. and E. E. Harris.* 1969. Print.

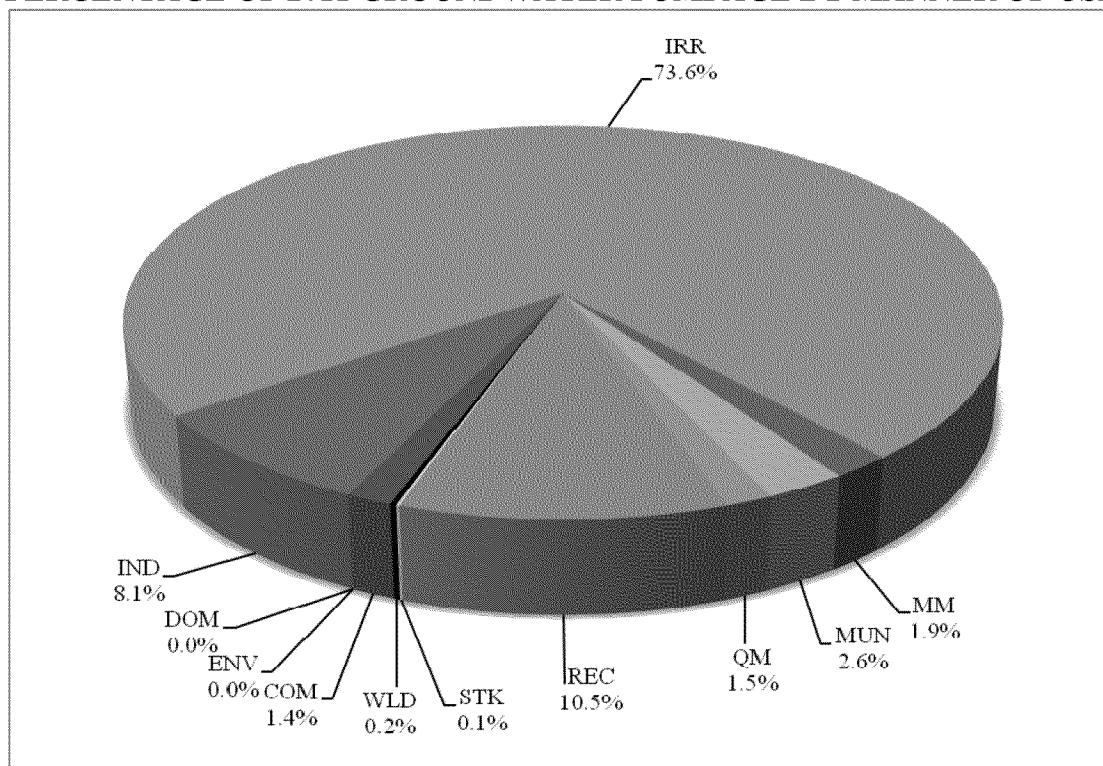
Nevada Department of Conservation and Natural Resources, Division of Water Resources. *Estimated Annual Ground-Water Pumpage 1994-2004 Smith Valley and Mason Valley Lyon County, Nevada. Tom Gallagher.* 2004, Print.

APPENDIX A

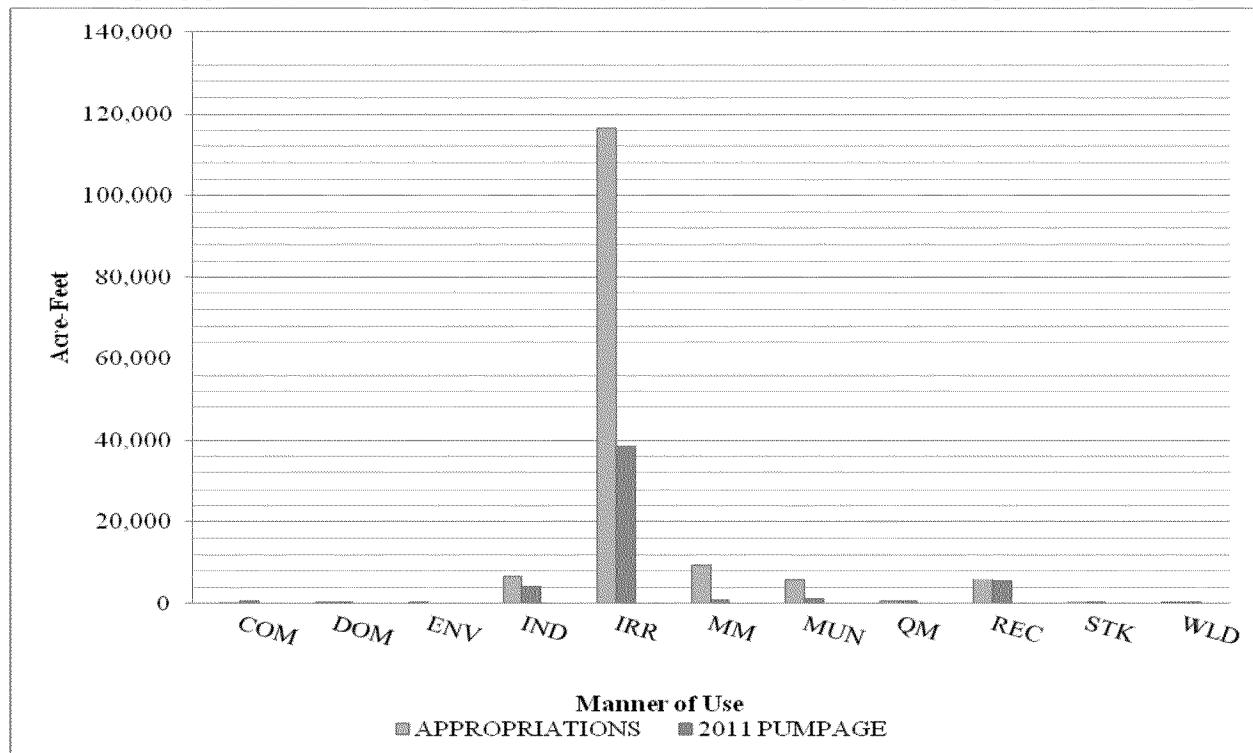
2011 GROUNDWATER PUMPAGE BY MANNER OF USE

2011 GROUNDWATER PUMPAGE APPROPRIATION VS. ACTUAL PUMPAGE

PERCENTAGE OF 2011 GROUNDWATER PUMPAGE BY MANNER OF USE



2011 GROUNDWATER PUMPAGE APPROPRIATIONS VS. ACTUAL PUMPAGE



APPENDIX B

EXPLANATION OF COLUMN HEADINGS FOR GROUNDWATER PUMPAGE BY APPLICATION NUMBER

MASON VALLEY 2011 GROUNDWATER PUMPAGE BY APPLICATION NUMBER

EXPLANATION OF COLUMN HEADINGS FOR GROUNDWATER PUMPAGE BY APPLICATION NUMBER

UNIQUE ID	An ID assigned to each well, based on its geographic location.	
APP NO.	The file number of the Application to Appropriate/Change Water.	
STATUS	Indicates if the application is a Permit (PER) or if it has been certificated. If an application has been certificated, the Certificate number will be listed in the column.	
MOU	The manner of use of the appropriated water.	
	COM- Commercial	MMD- Mining Milling & Dewatering
	DOM- Domestic	MUN- Municipal
	ENV- Environmental	QM- Quasi-Municipal
	IND- Industrial	REC- Recreational
	IRR- Irrigation	STK- Stockwater
	MM- Mining & Milling	WLD- Wildlife
OWNER OF RECORD	The owner of the water right as recorded in the files of the State Engineer. A water right may have more than one owner of record.	
QQ	The quarter quarter of the section in which the point of diversion is located.	
QTR	The quarter of the section in which the point of diversion is located.	
SEC	The section in which the point of diversion is located.	
T	The township in which the point of diversion is located.	
R	The range in which the point of diversion is located.	
PER. ACRES	The number of acres that are permitted to be irrigated.	
DUTY (AF)	The number of acre-feet of water that the permittee may pump. One acre-foot equals 325,851 gallons.	
SUPP ADJ	Where more than one permit is appurtenant to the same place of use, the permits are considered supplemental. Permits may be either completely or partially supplemental. In these cases, a total combined duty for the subject permits is employed.	
DUTY USED	The amount of water used during the calendar year, in acre-feet, as determined by review of records and/or field investigation.	
UNITS	AFA stands for acre-feet annually, and AFS stands for acre-feet seasonally. AFS limits water usage to certain months out of the year.	
SUPP GW APP NO.	The file number(s) of the supplemental water appropriations. Supplemental application groups are listed at the end of Appendix B.	

MASON VALLEY 2011 GROUNDWATER PUMPAGE BY APPLICATION NUMBER																
UNIQUE ID	APP NO.	STATUS	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER. ACRES	DUTY (AF)	SUPP	DUTY	UNITS	SUP GW GROUP NO.	
												ADJ	USED			
108 N13 E25 21DADC1	10763	2670	STK	SIRI, O'DAY AND MASTELOTTO	NE	SE	21	13N	25E		44.81	0.0	AFA			
108 N11 E25 11ACAA1	12389	4129	IRR	FORREST G. GODDE 1998 TRUST	SW	NE	11	11N	25E	468.60	1,616.46	3,135.44	0.0	AFA	1	
108 N14 E25 06DDCD1	13595	4231	IRR	MOREDA DAIRY	SE	SE	6	14N	25E	475.00	1,900.00	1,900.00	0.0	AFA	2	
108 N12 E25 35DCDD2	13879	5074	IRR	CAROLYN KATES	SW	SE	35	12N	25E	330.08	976.43		106.4	AFA		
108 N11 E25 01BC 1	13911	3921	STK	MINISTER, B.E.	SW	NW	1	11N	25E		22.40		0.0	AFA		
108 N13 E25 21BDAD1	14109	4392	MM	SINGATSE PEAK SERVICES	SE	NW	21	13N	25E		796.37	7,855.01	0.0	AFA	3	
108 N13 E25 21ABAD1	14111	4394	MM	SINGATSE PEAK SERVICES	NW	NE	21	13N	25E		1,290.03		0.0	AFA	3	
108 N13 E25 25CC 1	14377	4211	DOM	UGO GIORGI AND SONS	SW	SW	25	13N	25E		3.22		1.0	AFA		
108 N13 E26 31DB 1	14378	4212	DOM	UGO GIORGI AND SONS	NW	SE	31	13N	26E		3.22		1.0	AFA		
108 N13 E25 36DD 1	14379	4238	DOM	UGO GIORGI AND SONS	SE	SE	36	13N	25E		3.22		1.0	AFA		
108 N13 E25 21BA 1	15424	4397	MM	SINGATSE PEAK SERVICES	NE	NW	21	13N	25E		868.49		0.0	AFA	3	
108 N14 E24 36BC 1	15475	4292	STK	HENSLEY, JACK	SW	NW	36	14N	24E		2.18		0.0	AFA		
108 N10 E26 31AA 1	15825	5053	MM	RINK, RUTH KLINSTIVER	NE	NE	31	10N	26E		723.97		0.0	AFA		
108 N14 E26 26BDDD1	15946	5473	IRR	LAMBERT, VERNON & EVELYN	SE	NW	26	14N	26E	0.75	3.00	30.98	3.0	AFA	4	
108 N13 E26 02BC 1	15975	4792	DOM	HASKINS, CARROL R.	SW	NW	2	13N	26E		1.61			AFA		
108 N14 E26 22AAAD1	16034	5648	IRR	SUNRISE RANCH, LLC	NE	NE	22	14N	26E	39.03	156.11	928.00	156.1	AFA	5	
108 N15 E25 28AD 1	16546	5397	DOM	LARSON, LARS	SE	NE	28	15N	25E		0.95		1.0	AFA		
108 N13 E25 21DDBA1	16892	4647	STK	ISOLA, LOUIS J. AND MORICONI, RALPH	SE	SE	21	13N	25E		90.50		0.0	AFA		
108 N13 E26 09DCBB2	17100	5715	IRR	BEERS FAMILY 2002 TRUST	NW	SE	9	13N	26E	0.51	2.02		0.0	AFA		
108 N14 E26 35AD 1	17386	5857	DOM	MCKENZIE, JOHN A.	SE	NE	35	14N	26E		1.60			AFA		
108 N13 E25 17AABB1	18410	5484	MM	SINGATSE PEAK SERVICES	NE	NE	17	13N	25E		608.13		0.0	AFA	3	
108 N13 E25 09BAA1	18411	5485	MM	SINGATSE PEAK SERVICES	NW	NW	9	13N	25E		970.11		0.0	AFA	3	
108 N13 E25 33CA 1	18588	5272	IRR	FIELDING, WILLIAM AND MELISSA	NE	SW	33	13N	25E	5.00	20.00	20.00	0.0	AFA	6	
108 N13 E25 33CA 2	18589	5273	IRR	FIELDING, WILLIAM AND MELISSA	NE	SW	33	13N	25E	5.00	20.00		0.0	AFA	6	
108 N12 E25 14DDBB1	18654	5274	IRR	MICA FARMS, LLC	SE	SE	14	12N	25E	220.20	650.90	1,056.20	299.1	AFA	7	
108 N14 E25 16DDCD1	18672	6003	IRR	BALAAM, DONALD A. & OLGA M.	SE	SE	16	14N	25E	115.55	462.20		0.0	AFA		
108 N13 E25 13DDDD3	18676	5411	IRR	G LAZY B PARTNERSHIP	SE	SE	13	13N	25E	430.68	1,452.25	2,652.00	141.1	AFA	8	
108 N13 E25 35DBCC1	18682	6004	IRR	MASINI, TONY	NW	SE	35	13N	25E	198.00	792.00		119.1	AFA		
108 N13 E25 15CCBD1	18703	5911	IRR	CIRCLE BAR N RANCH	SW	SW	15	13N	25E	8.81	35.24		35.2	AFA		
108 N13 E25 10CACC1	18706	5412	IRR	CIRCLE BAR N RANCH	NE	SW	10	13N	25E	512.00	2,048.00		161.2	AFA		
108 N11 E25 01ADCD1	18707	6299	IRR	LEE IVY RANCHES, INC.	SE	NE	1	11N	25E	649.00	1,230.20	2,596.00	0.0	AFA	9	
108 N14 E26 32BCCC3	18712	5858	IRR	GABLE, O.D.	SW	NW	32	14N	26E	155.00	620.00		535.5	AFS		
108 N11 E25 01ABDD1	18715	6073	IRR	JOHN R. HARGUS & ADAH M. BLINN TRUST	NW	NE	1	11N	25E	410.00	1,640.00		0.0	AFA		
108 N14 E25 04BDCCD2	18729	7236	IRR	JASON CORPORATION	SE	NW	4	14N	25E	217.00	868.00	3,663.71	119.4	AFA	10	
108 N12 E26 06CDCB3	18730	5814	IRR	SANTOS, PAUL J. & CHRISTENA M.	SE	SW	6	12N	26E	162.00	648.00		238.1	AFA		
108 N14 E25 08ADDC1	18735	6421	IRR	BLAKELY FAMILY LIVING TRUST	SE	NE	8	14N	25E	265.00	1,060.00		188.1	AFA		
108 N13 E25 36DCAA1	18736	5824	IRR	MENESINI, LOUIE	SW	SE	36	13N	25E	114.00	456.00		8.8	AFS		
108 N12 E25 24CCCC1	18753	5661	IRR	HAMER, JOHN MURRAY & MARYANNA, TRUST	SW	SW	24	12N	25E	153.35	613.40		8.0	AFA		
108 N12 E25 12BDDDI	18766	5671	IRR	LEE, HARRY A.	SE	NW	12	12N	25E	75.88	188.24	303.52	110.7	AFA	11	
108 N14 E26 31DCCC2	18806	5979	IRR	RITTER, JOHN G. JR.	SW	SE	31	14N	26E	390.00	1,560.00		0.0	AFA		
108 N14 E25 31CA 1	18820	5697	STK	AGUIAR, GEORGE B. & JANIEL M.	NE	SW	31	14N	26E		6.66		0.0	AFA		
108 N13 E25 25CDDA2	18866	5695	STK	GIORG, BALDO	SE	SW	25	13N	25E		11.29		0.0	AFA		
108 N12 E26 06BBDD1	18867	6051	IRR	PUMPKIN HOLLOW FARMS	NW	NW	6	12N	26E	254.00	464.77	1,016.00	95.7	AFA	12	
108 N14 E25 15CDCC3	18925	5978	IRR	BARBER, HARRIET H.	SE	SW	15	14N	25E	331.17	1,324.68	2,214.16	510.6	AFA	13	
108 N14 E25 02ACDC1	18931	6074	IRR	WILDLIFE DEPARTMENT-NEVADA	SW	NE	2	14N	25E	400.74	1,602.96		0.0	AFS		
108 N14 E25 25BDA 1	18934	6075	IRR	WILDLIFE DEPARTMENT-NEVADA	SW	NE	25	14N	25E	295.68	1,182.72		1.5	AFS		
108 N14 E25 34CBCA2	18986	5277	IRR	ARSENIO FAMILY TRUST	NW	SW	34	14N	25E	231.00	924.00		574.5	AFA		
108 N12 E25 25CDDDI	19057	6105	IRR	BLASCO, JAMES M. FAMILY LTD PRTNRSHP	SE	SW	25	12N	25E	695.00	2,780.00	2,836.00	312.6	AFA	14	
108 N14 E26 32BDDD2	19062	5826	IRR	MANHA, JOSEPH	SE	NW	32	14N	26E	116.00	464.00		5.7	AFA		
108 N13 E25 24ACBB1	19068	6463	IRR	BITLER FAMILY TRUST, KEN & PEGGY	SW	NE	24	13N	25E	663.00	2,652.00		1,038.1	AFA	8	
108 N13 E25 24BCCC1	19101	6038	IRR	FRADE RANCHES INC.	SW	NW	24	13N	25E	298.42	1,193.68		1,149.7	AFA		
108 N12 E25 02DBDD1	19113	6021	IRR	R. N. FULSTONE COMPANY	NW	SE	2	12N	25E	197.00	788.00	1,716.80	437.5	AFA	15	
108 N15 E25 32AADD3	19516	6599	IRR	PALMER, ALFRED W.	NE	NE	32	15N	25E	423.50	1,694.00		795.6	AFA		
108 N14 E26 31CDBC2	19599	5997	IRR	AGUIAR, GEORGE B. & JANIEL M.	SE	SW	31	14N	26E	367.00	1,130.50		1.1	AFA		
108 N14 E26 32ADCD2	19661	6658	IRR	LANDOLT, JOSEPH G. & BEVERLY JANE	SE	NE	32	14N	26E	310.00	1,240.00		240.2	AFA		
108 N13 E25 23DDDC1	19667	5414	IRR	FRADE RANCHES, INC.	SE	SE	23	13N	25E	283.00	1,132.00		0.8	AFA		
108 N12 E25 23CDDDI	19692	6100	IRR	BORSINI RANCH, INC.	SE	SW	23	12N	25E	122.00	488.00		0.0	AFA		

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												ADJ	USED			
108 N12 E25 11CADD1	19706	6283	IRR	BALAAAM, VERA L.	NE	SW	11	12N	25E	359.00	1,436.00	836.20	243.7	AFA	16	
108 N13 E25 14DCCD1	19744	6383	IRR	LOMMORI, MARIANNA	SW	SE	14	13N	25E	150.00	600.00		407.5	AFA		
108 N13 E26 06DDDB1	19750	5927	IRR	CIRCLE BAR N RANCH	SE	SE	6	13N	26E	106.59	426.36		766.0	AFA		
108 N11 E25 10DBCBA1	19758	6486	IRR	SCATENA, CHETI	NW	SE	10	11N	25E	348.82	1,395.28		157.3	AFA		
108 N12 E25 03BCDC2	19828	6097	IRR	SCEIRINE, E. J. & JOS. & DAVID	SW	NW	3	12N	25E	179.20	615.75		0.0	AFA		
108 N13 E25 35CCDD1	19829	6098	IRR	DESERT PEARL FARMS LLC	SW	SW	35	13N	25E	141.00	564.00	1,388.00	264.0	AFA	17	
108 N14 E25 09DDDD2	19838	5920	IRR	DANIEL E DEL PORTO & CHERYL A DEL PORTO FAMILY TRUST	SE	SE	9	14N	25E	37.00	148.00		148.0	AFA		
108 N14 E25 09DDDD2	19839	6063	IRR	CLARENCE J. MOREDA FAMILY TRUST	SE	SE	9	14N	25E	136.00	544.00		11.3	AFA		
108 N14 E25 09DDDD2	19840	5950	IRR	STOCKTON, EDWARD & LINDA A.	SE	SE	9	14N	25E	57.00	228.00		0.0	AFA		
108 N13 E25 13CCCD1	19841	5618	IRR	SCIARANI, ARNOLD JR.	SW	SW	13	13N	25E	315.00	1,260.00		31.9	AFA		
108 N13 E25 13ACCC1	19873	6103	IRR	DEGROOT FAMILY TRUST DATED 6-7-93	SW	NE	13	13N	25E	224.09	896.36		398.8	AFA		
108 N11 E25 11BCDD1	19935	6641	IRR	CAPURRO, ROBERT STEVE AND JANICE ELIZABETH	SW	NW	11	11N	25E	144.90	579.60		55.0	AFA		
108 N14 E26 34CDAA1	20369	5932	IRR	EASTERBY, DAVID & CARMALETTA	SE	SW	34	14N	26E	61.80	247.20		0.0	AFA		
108 N14 E25 29DCBB1	20698	7086	IRR	MCCORMICK, HILDA T., ROBERT J.	SW	SE	29	14N	25E	5.80	23.20		0.0	AFA		
108 N14 E25 06DDDD1	21921	6500	IRR	MOREDA DAIRY	SE	SE	6	14N	25E	474.50	1,898.00		317.8	AFA	2	
108 N13 E25 33CA 2	22671	6384	DOM	SCHIMPF, GERTRUDE M.	NE	SW	33	13N	25E	3.22			1.0	AFA		
108 N14 E25 20DDDB1	23356	6603	IRR	LEMOS, JOELLEN	SE	SE	20	14N	25E	30.00	120.00			AFA		
108 N13 E25 05BDDA1	23793	7652	MM	SINGATSE PEAK SERVICES	SE	NW	5	13N	25E		1,614.23		0.0	AFA	3	
108 N14 E25 29ACAC1	23913	8007	IRR	CIRONE, ALLEN W. & AMANDA J.	SW	NE	29	14N	25E	3.00	12.00		0.0	AFA		
108 N13 E26 05DBC1	24013	8286	IRR	CIRCLE BAR N RANCH	NW	SE	5	13N	26E	365.00	1,460.00	1,590.68	409.0	AFA	18	
108 N14 E25 04BDCC2	25201	8955	IRR	JASON CORPORATION	SE	NW	4	14N	25E	165.00	660.00		0.0	AFA	10	
108 N13 E25 16DDCD1	25399	8428	MM	SINGATSE PEAK SERVICES	SE	SE	16	13N	25E		1,628.66		981.8	AFA	3	
108 N13 E25 24BCCC1	25633	8934	IRR	FRADE RANCHES INC.	SW	NW	24	13N	25E	350.00	1,400.00	2,289.20	0.0	AFA	19	
108 N13 E25 11ADB2	25813	8861	IRR	WALKER RIVER IRRIGATION DISTRICT	SW	NE	11	13N	25E	11,774.26	3,269.63		0.0	AFA		
108 N12 E25 27ADDD1	25892	9217	IRR	BLASCO, JAMES M. FAMILY LTD PRTRNSHP	SE	NE	27	12N	25E	234.00	936.00		237.4	AFA	14	
108 N14 E26 26CCDD1	25916	9246	IRR	HENRY, DALE E.	SW	SW	26	14N	26E	158.00	632.00		677.5	AFA		
108 N13 E25 27ABAC1	26099	15152	REC	COTTONWOOD PROPERTY ACQUISITION LLC	NW	NE	27	13N	25E		192.36		0.0	AFA		
108 N13 E25 15BBC1	26213	8469	COM	W.&H. OIL COMPANY OF NEVADA	NW	NW	15	13N	25E		1.99		2.0	AFA		
108 N14 E25 12ABA1	26311	8148	IND	SPPC	NE	NE	12	14N	25E		3,620.00	5,395.07	2,827.7	AFA	20	
108 N14 E25 01ADCC1	26312	8149	IND	SPPC	SE	NE	1	14N	25E		2,240.00		1,384.2	AFA	20	
108 N12 E26 06BDD1	26368	9229	IRR	WILLIAMS/STETLOW A GENERAL PARTNERSHIP	SW	NE	6	12N	26E	153.00	612.00		133.7	AFA		
108 N14 E26 32ADCD2	27123	8963	IRR	LANDOLT, JOSEPH & BEVERLY	SE	NE	32	14N	26E	126.00	504.00		0.0	AFA		
108 N13 E25 01CCAB1	27302	8919	IRR	AIAZZI, ESTELLE M.	SW	SW	1	13N	25E	13.05	52.20		7.3	AFA		
108 N14 E26 29DCAA1	27839	8755	IRR	RITTER, JOHN G. JR.	SW	SE	29	14N	26E	175.00	700.00		222.7	AFA		
108 N14 E25 16CDCB2	27929	9415	IRR	UNITED STATES OF AMERICA IN TRUST FOR YERINGTON PAIUTE TRIBE	SE	SW	16	14N	25E	270.30	1,081.20		1,541.1	AFA		
108 N14 E25 08ADDC1	27943	8971	IRR	BLAKELY FAMILY LIVING TRUST	SE	NE	8	14N	25E	100.00	400.00		0.0	AFA		
108 N11 E25 10CDC1	28042	9855	IRR	FIETTA, PATRICIA	SE	SW	10	11N	25E	37.90	151.60		12.3	AFA		
108 N12 E25 11AADC1	28067	8909	IRR	MENESINI, RONALD D. & CYNTHIA L.	NE	NE	11	12N	25E	12.90	51.60	736.00	42.6	AFA	21	
108 N12 E25 01DDCD1	28194	8508	IRR	GIORGILYNDA HUNEWILL	SE	SE	1	12N	25E	100.00	400.00		183.0	AFA		
108 N12 E25 01BDD1	28195	10462	IRR	DESERT PEARL FARMS	SE	NW	1	12N	25E	344.70	1,378.80		962.1	AFA	15	
108 N12 E25 12CDAA1	28268	9346	IRR	BAR KEYSTONE RANCH LLC	SW	SE	12	12N	25E	153.00	612.00		0.0	AFA		
108 N13 E26 08ABCD1	28290	8679	IRR	PETERSON, ANGEL D'ANNE	NW	NE	8	13N	26E	21.50	86.00		80.0	AFA		
108 N14 E26 22BDCC2	29299	9541	IRR	L & M FAMILY LIMITED PARTNERSHIP	SE	NW	22	14N	26E	115.99	463.96		371.4	AFA	5	
108 N12 E25 12BDD1	29621	9222	IRR	STEELE, CHARLES R. & KAREN R.	SE	NW	12	12N	25E	88.00	352.00		0.0	AFA		
108 N12 E26 06CDCB2	30050	10702	IRR	SANTOS, PAUL J. & CHRISTINE M.	SE	SW	6	12N	26E	148.30	593.20		17.1	AFA		
108 N13 E26 07BDD1	30068	10419	IRR	CIRCLE BAR N RANCH	NW	NW	7	13N	26E	343.26	1,373.04		633.5	AFA		
108 N13 E25 34CDAB1	30166	9798	IRR	FULSTONE, DAVID H.	NE	SW	34	13N	25E	365.00	1,460.00		325.2	AFA		
108 N14 E25 27BAAB1	30169	10420	IRR	BARBER, HARRIET	NE	NW	27	14N	25E	546.99	706.12		23.8	AFA	13	
108 N13 E25 26DDC1	30190	9858	IRR	FRASER, GEORGE W.	SE	SE	26	13N	25E	154.00	616.00		2.0	AFA		
108 N13 E25 35BDCC1	30193	9859	IRR	ANDERSEN FAMILY 1992 TRUST, MICHAEL FARETTO FAMILY 1996 TRUST	SE	NW	35	13N	25E	106.08	424.32		0.3	AFA		
108 N14 E26 34DBC1	30218	9432	IRR	MICHAEL FARETTO FAMILY 1996 TRUST	NW	SE	34	14N	26E	2.50	10.00		1.1	AFA		
108 N13 E25 01DBCC2	30259	10421	IRR	DAVID M. LITTLE FAMILY TRUST 5/26/96	NW	SE	1	13N	25E	336.60	1,346.40		458.2	AFA		
108 N13 E26 07ADBC1	30263	10703	IRR	CIRCLE BAR N RANCH	SE	NE	7	13N	26E	142.89	571.56		382.2	AFA		
108 N13 E26 05DCBC2	30265	10704	IRR	MCMINN FAMILY TRUST, DATED 5/21/1999	SW	SE	5	13N	26E	20.00	80.00		0.0	AFA		
108 N12 E25 12BADA1	30287	10507	IRR	PURSEL, MELVIN E.	NE	NW	12	12N	25E	121.20	484.80		1.0	AFA		
108 N13 E25 36CBDD1	30362	9383	IRR	CREMETTI, WILLIAM	NW	SW	36	13N	25E	188.00	752.00		384.0	AFA		
108 N12 E25 11BCDC1	30396	9352	IRR	SNYDER LIVESTOCK COMPANY, INC.	SW	NW	11	12N	25E	10.00	40.00		40.0	AFA	16	

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												ADJ	USED			
108 N14 E25 04CCCC1	30409	10422	IRR	DESERT PEARL FARMS	SW	SW	4	14N	25E	336.40	1,345.60		297.5	AFA	10	
108 N13 E25 26BDCC1	30439	9831	IRR	QUILICI, ANGELO	SE	NW	26	13N	25E	182.30	729.20		465.8	AFA		
108 N14 E26 22AAAD1	30447	9886	IRR	L & M FAMILY LIMITED PARTNERSHIP	NE	NE	22	14N	26E	115.99	463.96		464.0	AFS	5	
108 N11 E25 01CCDD1	30517	13373	IRR	DELANEY, BARRY F. & DEBORAH	SW	SW	1	11N	25E	738.61	2,954.44		413.6	AFA	1	
108 N11 E25 02CDDD1	30518	13374	IRR	DELANEY, BARRY F. & DEBORAH	SW	SE	2	11N	25E	463.40	1,853.60		125.9	AFA	1	
108 N12 E25 12DCCC1	30520	9365	IRR	PELLEGRINI, STEVE	SW	SE	12	12N	25E	9.20	36.80		4.6	AFA		
108 N13 E26 04CADD1	30521	10423	IRR	CIRCLE BAR N RANCH	NE	SW	4	13N	26E	385.93	1,543.72		272.8	AFA	18	
108 N13 E25 22CBBB1	30926	9306	IRR	JEFFREY J. RIFE AND DEBORAH K. RIFE FAMILY TRUST	NW	SW	22	13N	25E	155.00	620.00		428.3	AFA		
108 N14 E26 32DCCB1	30990	11027	IRR	THOMPSON, CLIFFORD A.	SW	SE	32	14N	26E	332.10	1,328.40		54.1	AFA		
108 N12 E26 06AAC2	30992	9832	IRR	EWERT FAMILY 1995 TRUST	NE	NE	6	12N	26E	91.40	365.60		1.9	AFA		
108 N14 E26 19DD 1	31826	10364	STK	AGUIAR, GEORGE B. & JANIEL M.	SE	SE	19	14N	26E		7.86		0.0	AFA		
108 N13 E25 01DD 1	33522	10269	STK	TAMAGNI, JANICE	SE	SE	1	13N	25E		13.44		0.0	AFA		
108 N13 E25 12CDCB1	35867	10794	REC	LYON COUNTY	SE	SW	12	13N	25E		3.53		2.0	AFA		
108 N13 E26 31DDDD2	36330	9624	IRR	COOPER JOHN AND ROBERT	SE	SE	31	13N	26E	5.22	20.88		0.0	AFA		
108 N13 E25 25BACCI	38153	11630	QM	LYON COUNTY	NE	NW	25	13N	25E		2.95			AFA		
108 N13 E26 16BA 1	41155	10737	QM	MOSS, JIM	NE	NW	16	13N	26E		1.01		1.0	AFA		
108 N13 E25 27DCCD2	41363	11035	IRR	BUNKOWSKI, TERRY L. & ALDRIDGE, FRED	SW	SE	27	13N	25E	400.73	1,602.92		352.4	AFA		
108 N13 E26 08DD 1	43168	11731	QM	BLEVINS, CCURTIS	SE	SE	8	13N	26E		1.10		1.1	AFA		
108 N15 E25 31BA 1	43320	10351	STK	CLARENCE J. MOREDA FAMILY TRUST	NE	NW	31	15N	25E		2.24		2.2	AFA		
108 N13 E26 16BA 1	44503	11016	STK	MOSS, JIM	NE	NW	16	13N	26E		0.74		0.0	AFA		
108 N13 E25 21DA 1	45226	11270	IND	D AND G INVESTMENTS	NE	SE	21	13N	25E		0.25		0.2	AFA		
108 N14 E25 03BCDD1	45323	PER	COM	MASINI INVESTMENTS	SW	NW	3	14N	25E		7.40		1.2	AFA		
108 N12 E26 33CB 1	45408	11378	STK	PITCHFORK RANCH INC.	NW	SW	33	12N	26E		22.40	22.40	6.4	AFA	22	
108 N12 E26 33CC 1	45409	11379	QM	PITCHFORK RANCH INC.	SW	SW	33	12N	26E		5.60	6.72	2.7	AFA	23	
108 N12 E26 33CB 1	45410	11380	QM	PITCHFORK RANCH INC.	NW	SW	33	12N	26E		1.67		0.8	AFA	23	
108 N11 E26 04BB 1	45411	11381	STK	PITCHFORK RANCH INC.	NW	NW	4	11N	26E		22.40		6.4	AFA	22	
108 N12 E26 33CC 1	45412	11382	STK	PITCHFORK RANCH INC.	SW	SW	33	12N	26E		22.40		6.4	AFA	22	
108 N11 E26 04BB 1	45413	11383	QM	PITCHFORK RANCH INC.	NW	NW	4	11N	26E		6.72		3.3	AFA	23	
108 N15 E25 21CAAD1	45594	11914	IND	BREAK-A-HEART, LLC	NE	SW	21	15N	25E		1,130.86		31.8	AFA	26	
108 N14 E26 13CC 1	46709	11694	STK	DAVID P. STIX	SW	SW	13	14N	26E		13.44		0.0	AFA		
108 N11 E26 33CA 1	46830	11083	STK	FULSTONE, BARTON	NE	SW	33	11N	26E		6.72		6.7	AFA		
108 N11 E26 20BD 1	46831	11084	STK	FULSTONE, BARTON	SE	NW	20	11N	26E		6.72		0.0	AFA		
108 N13 E26 09AACB1	46884	12666	QM	SHATTUCK, LOREN F.	NE	NE	9	13N	26E		2.24		2.2	AFA		
108 N12 E25 13CABDI	47013	13368	IRR	RAUBER INLOW TRUST	NE	SW	13	12N	25E	9.34	37.34		0.0	AFA		
108 N12 E25 13CDBDI	47014	16806	IRR	GUSSENHOVEN, JOYCE L.	SE	SW	13	12N	25E	9.00	36.00		0.0	AFA		
108 N14 E26 23CDC1	47116	12466	QM	HAMILTON, RUTH VIRGINIA	SE	SW	23	14N	26E		0.12		0.1	AFA		
108 N13 E26 34BC 1	47649	12410	STK	HILTON, BARRON	SW	NW	34	13N	26E		4.63		0.0	AFA		
108 N13 E27 08DB 1	47650	12669	STK	HILTON, BARRON	NW	SE	8	13N	27E		3.25		0.0	AFA		
108 N13 E26 02BAB1	47672	12329	STK	CIRCLE BAR N RANCH	LT03	2	13N	26E			13.04		0.0	AFA		
108 N14 E26 35BCAA1	48290	12671	IRR	LEAVITT, BRIAN B. & KIM S.	SW	NW	35	14N	26E	11.00	44.00		58.1	AFA		
108 N13 E26 18DBBC1	48616	11881	IRR	TRADE RANCHES INC.	NW	SE	18	13N	26E	5.30	21.20		21.2	AFA	19	
108 N13 E26 04DDCA1	48636	13037	QM	TRINITY EVANGELICAL FREE CHURCH	SE	SE	4	13N	26E		0.37		0.4	AFA		
108 N13 E26 03DD 1	49093	12468	QM	YEAGLEY, JUNE I.	SE	SE	3	13N	26E		0.43		0.4	AFA		
108 N13 E25 04CB 1	49222	PER	ENV	ATLANTIC RICHFIELD COMPANY	NW	SW	4	13N	25E		49.72		0.0	AFA		
108 N13 E25 05ADD1	49223	PER	ENV	ATLANTIC RICHFIELD COMPANY	SE	NE	5	13N	25E		10.50		0.0	AFA		
108 N11 E25 01CCDD1	49250	15155	IRR	FORREST G. GODDE 1998 TRUST	SW	SW	1	11N	25E	215.16	801.57	954.36	0.0	AFA	24	
108 N12 E27 04CB 1	49413	11535	STK	BLM	NW	SW	4	12N	27E		3.07		2.2	AFA		
108 N14 E25 19AC 1	49424	12576	STK	BLM	SW	NE	19	14N	25E		2.18		0.0	AFA		
108 N14 E25 31DB 1	49425	12577	STK	BLM	NW	SE	31	14N	25E		2.18		0.0	AFA		
108 N12 E27 18BCCB1	49835	12445	STK	BLM	LT02	18	12N	27E			8.96		2.2	AFA		
108 N13 E27 32DC 1	49836	12446	STK	BLM	NW	SE	32	13N	27E		7.24		0.0	AFA		
108 N13 E26 17CBBC1	50668	12559	STK	TRADE RANCHES, INC.	NW	SW	17	13N	26E		3.38		1.1	AFA		
108 N14 E26 18BDCB3	50704	13649	WLD	WILDLIFE DEPARTMENT-NEVADA	SE	NW	18	14N	26E		108.60	5,899.28	108.6	AFA	25	
108 N14 E25 05AADD1	51014	12836	IRR	JASON CORP.	NE	NE	5	14N	25E	287.40	1,149.60		391.6	AFA	10	
108 N15 E25 21CAAD2	51100	PER	IND	BREAK-A-HEART, LLC	NE	SW	21	15N	25E		100.00	1,430.51	0.0	AFA	26	
108 N14 E25 06DDDD1	51768	12571	IRR	MOREDA DAIRY	SE	SE	6	14N	25E	425.26	275.19		0.0	AFA	2	
108 N13 E25 03AADD1	51939	14135	IRR	SCEIRINE, E. J. & JOS & DAVID	NE	NE	3	13N	25E	172.80	593.77		0.0	AFA		

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UNIQUE ID	APP NO.	STATUS	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER. ACRES	DUTY (AF)	SUPP	DUTY	UNITS	SUP GW APP NO.	
												ADJ	USED			
108 N15 E25 31AA 1	52506	12815	STK	EQUITY PRESERVATION, INC.	NE	NE	31	15N	25E		4.36		4.4	AFA		
108 N13 E25 24CD 1	53028	13934	STK	FRADE RANCHES, INC.	SE	SW	24	13N	25E		4.36		3.7	AFA		
108 N11 E25 01CCDD1	54419	15156	IRR	FORREST G. GODDE 1998 TRUST	SW	SW	1	11N	25E	23.60	88.03		0.0	AFA	24	
108 N13 E25 22CC 1	54473	14886	IRR	ALDRIDGE, C. FRED	SW	SW	22	13N	25E	24.38	97.52		0.0	AFA		
108 N13 E25 36BDBC1	54842	14471	IRR	DESERT PEARL FARMS	SE	NW	36	13N	25E	121.59	486.36		124.0	AFA		
108 N13 E25 26DAAA1	54860	14559	IRR	DESERT PEARL FARMS	SE	NE	26	13N	25E	147.48	589.92		589.9	AFA		
108 N13 E25 26DAAA1	55676	14560	IRR	DESERT PEARL FARMS	SE	NE	26	13N	25E	35.00	140.00		159.1	AFA		
108 N13 E25 36BDBC1	55677	14472	IRR	DESERT PEARL FARMS	SE	NW	36	13N	25E	64.74	258.96		0.0	AFA		
108 N12 E25 22ADDD1	55955	14421	IRR	BORSINI RANCH, INC.	SE	NE	22	12N	25E	97.20	388.80	557.80	0.0	AFA	27	
108 N11 E25 01ACCB1	56020	15168	IRR	LEE IVEY RANCH, INC.	SW	NE	1	11N	25E	615.10	1,543.87		761.4	AFA	9	
108 N12 E25 11AABB1	56251	14422	IRR	MENESINI, RONALD D. & CYNTHIA L.	NE	NE	11	12N	25E	171.10	684.40		151.8	AFA	21	
108 N12 E25 23DADD1	56594	14202	IRR	KELTON, DARON JAY AND SUZANNE C.	NE	SE	23	12N	25E	341.75	94.72	1,367.00	57.2	AFA	28	
108 N12 E25 24Bbcc2	56595	14203	IRR	KELTON, DARON JAY AND SUZANNE C.	NW	NW	24	12N	25E	341.75	157.21		113.1	AFA	28	
108 N12 E25 24Bbcc2	56596	14204	IRR	KELTON, DARON JAY AND SUZANNE C.	NW	NW	24	12N	25E	341.75	382.06		0.0	AFA	28	
108 N12 E25 23DADD1	56597	14205	IRR	KELTON, DARON JAY AND SUZANNE C.	NE	SE	23	12N	25E	341.75	98.38		0.0	AFA	28	
108 N12 E25 23DADD2	56598	14206	IRR	KELTON, DARON JAY AND SUZANNE C.	NE	SE	23	12N	25E	341.75	491.91		125.5	AFA	28	
108 N12 E25 23DADD1	56599	14207	IRR	KELTON, DARON JAY AND SUZANNE C.	NE	SE	23	12N	25E	341.75	142.72		0.0	AFA	28	
108 N13 E26 31CBBd1	56798	PER	IRR	CHICO FAMILY TRUST	NW	SW	31	13N	26E	27.33	109.33		0.0	AFA		
108 N14 E25 33BA 1	57079	14986	STK	FOUR G CORPORATION	NE	NW	33	14N	25E		8.50		0.5	AFA		
108 N12 E26 31DBCD1	57188	PER	IRR	PITCHFORK RANCH INC.	NW	SE	31	12N	26E	60.00	240.00			AFA		
108 N13 E25 25CDCC1	57247	14966	IRR	PUMPKIN HOLLOW FARMS	SE	SW	25	13N	25E	254.00	1,016.00		379.9	AFA	12	
108 N14 E26 34ADAA1	57254	15083	IRR	AMMONS, JAMES T. AND SUSAN R.	SE	NE	34	14N	26E	24.70	98.78		0.0	AFA		
108 N13 E25 15CCBD1	57256	14967	IRR	SNYDER LIVESTOCK COMPANY, INC.	SW	SW	15	13N	25E	46.90	187.60		45.2	AFA		
108 N11 E25 11ACAB1	57261	15157	IRR	FORREST G. GODDE 1998 TRUST	SW	NE	11	11N	25E	215.16	801.57		29.3	AFA	24	
108 N11 E25 11ACAB1	57262	15158	IRR	FORREST G. GODDE 1998 TRUST	SW	NE	11	11N	25E	23.60	88.03		0.0	AFA	24	
108 N11 E26 04BADD1	57576	14372	STK	PITCHFORK RANCH, INC.	NE	NW	4	11N	26E		11.76		0.0	AFA	22	
108 N14 E25 27ACCD1	57865	15423	STK	THE DAVID M. LITTLE FAMILY TRUST	SW	NE	27	14N	25E		3.60		0.0	AFA		
108 N14 E25 27ACDC1	57866	14709	IRR	POLI, JOHN	SW	NE	27	14N	25E	138.29	553.16		133.5	AFS		
108 N14 E25 27ACDC1	57867	PER	IRR	THE DAVID M. LITTLE FAMILY TRUST	SW	NE	27	14N	25E	401.00	1,447.90		0.0	AFA		
108 N13 E25 03AADD1	58027	14220	IRR	SCEIRINE, EDNA JAYNE	NE	NE	3	13N	25E	38.00	130.58		0.0	AFA		
108 N14 E25 25CC 1	58105	15281	STK	EWERT FAMILY 1995 TRUST	SW	SW	25	14N	25E		4.48		0.0	AFA		
108 N12 E25 22ADDD1	58166	14613	IRR	BORSINI RANCH, INC.	SE	NE	22	12N	25E	9.00	36.00		0.0	AFA	27	
108 N12 E25 22ADDD1	58168	14614	IRR	BORSINI RANCH, INC.	SE	NE	22	12N	25E	31.00	124.00		0.0	AFA	27	
108 N14 E25 03CCCC1	58170	14473	COM	GARCIA, ROGELIO AND CARMAN	SW	SW	3	14N	25E		2.80		0.4	AFA		
108 N14 E25 21DBBD1	58174	14255	IRR	CLIFF, DONALD A.	NW	SE	21	14N	25E	116.72	466.88		202.0	AFA		
108 N12 E25 12BCAD1	58352	15387	IRR	LEE, THOMAS WILLIAM	SE	NW	12	12N	25E	75.88	255.47		145.7	AFA	11	
108 N12 E25 01Dacci1	58481	14548	IRR	RODERICK, JOSEPH E.	NE	SE	1	12N	25E	221.50	576.00	886.00	198.6	AFA	29	
108 N12 E25 01AADD1	58482	14549	IRR	THE SMITH LIVING TRUST DATED OCTOBER 20 1998	NE	NE	1	12N	25E	221.50	310.00		567.2	AFA	29	
108 N12 E25 24BBCD1	58486	14969	IRR	MICA FARMS, LLC	SW	NW	24	12N	25E	13.62	54.48		44.8	AFA		
108 N14 E25 19DDDD1	58527	PER	MM	SINGATSE PEAK SERVICES	SE	SE	19	14N	25E		758.00		0.0	AFA		
108 N14 E25 10CCDD1	58752	PER	IRR	LAWRENCE C. MASINI RANCH	SW	SW	10	14N	25E	632.00	2,528.00	5,262.80	1,899.6	AFA	30	
108 N14 E25 04DCAA1	58753	PER	IRR	LAWRENCE C. MASINI RANCH	SW	SE	4	14N	25E	562.50	1,896.00		371.1	AFA	30	
108 N15 E25 34ABDD1	58755	PER	IRR	LAWRENCE C. MASINI RANCH	SW	NE	34	15N	25E	150.00	600.00		584.6	AFA	30	
108 N14 E25 10CBbb1	58756	PER	IRR	LAWRENCE C. MASINI RANCH	NW	SW	10	14N	25E	189.78	759.11		265.5	AFA	30	
108 N14 E25 15ACBB1	58757	PER	IRR	LAWRENCE C. MASINI RANCH	SW	NE	15	14N	25E	98.00	392.00		23.0	AFA	30	
108 N14 E25 15ACBB1	58758	PER	IRR	LAWRENCE C. MASINI RANCH	SW	NE	15	14N	25E	54.50	218.00		0.0	AFA	30	
108 N14 E25 15ACBB1	58759	PER	IRR	LAWRENCE C. MASINI RANCH	SW	NE	15	14N	25E	30.22	120.89		0.0	AFA	30	
108 N13 E26 18CDD1	59091	14971	STK	G LAZY B PARTNERSHIP	SE	SW	18	13N	26E		8.96		0.0	AFA		
108 N12 E25 08DCAA1	59847	14591	STK	F.I.M. CORP.	SW	SE	8	12N	25E		8.96		1.3	AFA		
108 N13 E25 26CBDD3	59997	14972	COM	DESERT PEARL FARMS	NW	SW	26	13N	25E		1.00		0.0	AFA		
108 N12 E25 03BCDC2	60495	14775	IRR	SCEIRINE, AVID	SW	NW	3	12N	25E	42.00	144.32		0.0	AFA		
108 N13 E25 27ABAC1	60553	15303	REC	COTTONWOOD PROPERTY ACQUISITION	NW	NE	27	13N	25E		43.48	51.00	0.0	AFA	31	
108 N13 E25 27ABAC1	60554	15304	REC	COTTONWOOD PROPERTY ACQUISITION, LLC	NW	NE	27	13N	25E		12.93		0.0	AFA	31	
108 N13 E25 27ABAC1	60555	15306	REC	COTTONWOOD PROPERTY ACQUISITION, LLC	NW	NE	27	13N	25E		33.73		0.0	AFA	31	
108 N13 E25 27ABAC1	60556	15305	REC	COTTONWOOD PROPERTY ACQUISITION, LLC	NW	NE	27	13N	25E		23.59		0.0	AFA	31	
108 N14 E26 18CACB1	60557	15336	REC	WILDLIFE DEPARTMENT-NEVADA	NE	SW	18	14N	26E		861.50		861.5	AFA	25	
108 N14 E26 18CACB1	60558	15337	REC	WILDLIFE DEPARTMENT-NEVADA	NE	SW	18	14N	26E		861.50		861.5	AFA	25	

MASON VALLEY 2011 GROUNDWATER PUMPAGE BY APPLICATION NUMBER

UNIQUE ID	APP NO.	STATUS	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER. ACRES	DUTY (AF)	SUPP	DUTY	UNITS	SUP GW APP NO.
												ADJ	USED		
108 N14 E26 18BDCB3	60559	15338	REC	WILDLIFE DEPARTMENT-NEVADA	SE	NW	18	14N	26E		1,180.07		1,180.1	AFA	25
108 N14 E26 18BACD1	60560	15339	REC	WILDLIFE DEPARTMENT-NEVADA	NE	NW	18	14N	26E		844.76		844.8	AFA	25
108 N14 E26 18BACA2	60561	15340	REC	WILDLIFE DEPARTMENT-NEVADA	NE	NW	18	14N	26E		844.76		593.1	AFA	25
108 N14 E26 17CD 1	60562	16263	REC	WILDLIFE DEPARTMENT-NEVADA	SE	SW	17	14N	26E		133.92		0.0	AFA	25
108 N13 E25 28ABDC1	60702	PER	QM	TIBBALS, DON H.	NW	NE	28	13N	25E		401.81	405.81	150.0	AFA	32
108 N14 E25 27BCDD1	60704	15531	IRR	BARBER, HARRIET	SW	NW	27	14N	25E	546.99	2,187.96		205.0	AFA	13
108 N11 E25 01ACCB1	60763	15169	IRR	LEE IVEY RANCH, INC.	SW	NE	1	11N	25E	649.00	85.07		0.0	AFA	9
108 N11 E25 01ADCD1	60764	15170	IRR	LEE IVEY RANCH, INC.	SE	NE	1	11N	25E	649.00	85.07		0.0	AFA	9
108 N15 E25 22CCDC1	61207	14927	IND	J.R. BENTON CO. LLC	SW	SW	22	15N	25E		8.96	8.96	0.0	AFA	33
108 N15 E25 22CCBC1	61208	14928	IND	J.R. BENTON CO. LLC	SW	SW	22	15N	25E		8.96		8.6	AFA	33
108 N13 E26 31DCDC1	61249	16014	IRR	CHICO, JAMES V.	SW	SE	31	13N	26E	1.50	6.00		6.9	AFS	
108 N13 E25 08AABB1	61449	PER	MM	SINGATSE PEAK SERVICES	NE	NE	8	13N	25E		160.00		0.0	AFA	3
108 N14 E25 12AABA1	61575	PER	WLD	SPPC	NE	NE	12	14N	25E		2,000.00		0.0	AFA	20
108 N12 E25 23BDDA1	61592	15107	IRR	BORSINI RANCH, INC	SE	NW	23	12N	25E	138.70	277.40	554.80	306.8	AFA	34
108 N12 E25 23BDDA1	61593	15108	IRR	BORSINI RANCH, INC	SE	NW	23	12N	25E	138.70	277.40		306.8	AFA	34
108 N13 E25 24BBD 1	61681	15996	STK	FRADE RANCHES, INCORPORATED	NW	NW	24	13N	25E		22.40	67.20	0.0	AFA	35
108 N15 E25 21DDDD1	61710	17777	COM	MILLER, EDMUND A. & LINDA	SE	SE	21	15N	25E		1.51		1.5	AFA	
108 N13 E25 28ABDC1	61718	PER	QM	TIBBALS, DON H.	NW	NE	28	13N	25E		401.81		0.0	AFA	32
108 N11 E25 10DCCC1	61882	PER	IRR	DRAPER, STEVEN M. & JENNIFER	SW	SE	10	11N	25E	33.80	135.20		205.2	AFA	
108 N11 E25 14BBBB1	61894	PER	STK	USFS	NW	NW	14	11N	25E		8.20		4.7	AFA	
108 N13 E25 24BBD 1	62252	PER	COM	FRADE RANCHES, INC.	NW	NW	24	13N	25E		54.32		35.0	AFA	35
108 N13 E26 09BADD1	62495	16372	COM	RUBERT, LOTUS R. & PEGGY J.	NE	NW	9	13N	26E		1.74		2.2	AFA	
108 N11 E25 10DBCA2	62833	18662	COM	LYON COUNTY-ELM TREE CEMETERY	NW	SE	10	11N	25E		0.97		0.1	AFA	
108 N12 E25 03CDCADI	63192	PER	QM	SNYDER LIVESTOCK COMPANY	SE	SW	3	12N	25E		1.93		2.1	AFA	
108 N14 E26 18BACA2	64604	17677	REC	WILDLIFE DEPARTMENT-NEVADA	NE	NW	18	14N	26E		181.67		0.0	AFA	25
108 N14 E26 07CBBA1	64605	PER	QM	WILDLIFE DEPARTMENT-NEVADA	NW	SW	7	14N	26E		10.00			AFA	
108 N14 E26 18BDCB3	64606	17678	REC	WILDLIFE DEPARTMENT-NEVADA	SE	NW	18	14N	26E		50.04		50.0	AFA	25
108 N14 E26 18BACD1	64607	17679	REC	WILDLIFE DEPARTMENT-NEVADA	NE	NW	18	14N	26E		181.63		451.4	AFA	25
108 N14 E26 18BDCB3	64608	17680	REC	WILDLIFE DEPARTMENT-NEVADA	SE	NW	18	14N	26E		131.58		184.7	AFA	25
108 N14 E26 17CD 1	64609	17681	REC	WILDLIFE DEPARTMENT-NEVADA	SE	SW	17	14N	26E		196.45		0.0	AFA	25
108 N14 E26 18CACB1	64610	17682	REC	WILDLIFE DEPARTMENT-NEVADA	NE	SW	18	14N	26E		160.31		334.7	AFA	25
108 N14 E26 18CACB1	64611	17683	REC	WILDLIFE DEPARTMENT-NEVADA	NE	SW	18	14N	26E		160.31		172.5	AFA	25
108 N14 E26 18BDCB2	64646	PER	QM	WILDLIFE DEPARTMENT-NEVADA	SE	NW	18	14N	26E		40.00		8.4	AFA	
108 N13 E26 08DCD1	65001	PER	IRR	DICKEY, CINDA	SW	SE	8	13N	26E	1.25	5.00		2.0	AFA	
108 N14 E25 06CCCC1	65209	PER	IRR	BRYAN MASINI CHILDREN'S TRUST	SW	SW	6	14N	25E	85.08	340.34	2,316.69	340.3	AFA	36
108 N14 E25 07BAAA1	65210	PER	IRR	BRYAN MASINI CHILDREN'S TRUST	NE	NW	7	14N	25E	520.00	2,080.00		486.8	AFA	36
108 N14 E24 01ADCC1	65211	PER	IRR	BRYAN MASINI CHILDREN'S TRUST	SE	NE	1	14N	24E	362.00	1,448.00		329.3	AFA	36
108 N14 E25 03DDDD2	65262	PER	IRR	LAWRENCE C. MASINI RANCH	SE	SE	3	14N	25E	218.50	874.00	3,897.42	254.6	AFA	37
108 N14 E25 03DDDD2	65263	PER	IRR	LAWRENCE C. MASINI RANCH	SE	SE	3	14N	25E	126.92	507.68		0.0	AFA	37
108 N14 E25 10ADCC1	65264	PER	IRR	LAWRENCE C. MASINI RANCH	SW	NE	10	14N	25E	180.03	720.12		163.2	AFA	37
108 N14 E25 10ADCC1	65265	PER	IRR	LAWRENCE C. MASINI RANCH	SW	NE	10	14N	25E	202.25	808.98		0.0	AFA	37
108 N13 E25 36BADD1	65278	PER	IRR	PERI, JAMES J.	NE	NW	36	13N	25E	8.68	34.72		22.3	AFA	
108 N13 E25 15DBBDD1	65296	PER	MUN	YERINGTON-CITY	NW	SE	15	13N	25E		1,085.96	5,625.86	529.6	AFA	38
108 N13 E25 14CCAA1	65297	PER	MUN	YERINGTON-CITY	SW	SW	14	13N	25E		598.43		0.0	AFA	38
108 N13 E25 14CADD1	65298	PER	MUN	YERINGTON-CITY	NE	SW	14	13N	25E		537.01		534.1	AFA	38
108 N13 E25 33BAB1	65299	PER	MUN	YERINGTON-CITY	NW	NE	33	13N	25E		723.97		311.6	AFA	38
108 N13 E25 22CDDDI	65300	PER	MUN	YERINGTON-CITY	SE	SW	22	13N	25E		723.97		0.0	AFA	38
108 N13 E25 14CADD1	65302	PER	MUN	YERINGTON-CITY	NE	SW	14	13N	25E		112.01		0.0	AFA	38
108 N13 E25 15DBBDD1	65303	PER	MUN	YERINGTON-CITY	NW	SE	15	13N	25E		112.01		0.0	AFA	38
108 N13 E25 14CADD1	65358	PER	MUN	YERINGTON-CITY	NE	SW	14	13N	25E		723.97		0.0	AFA	38
108 N12 E25 11CCDC1	65384	PER	IRR	ANDERSON FAMILY 1992 TRUST	SW	SW	11	12N	25E	29.02	116.08	701.06	16.0	AFA	39
108 N13 E25 04AABB1	65724	PER	IRR	DESERT PEARL FARMS	NE	NE	4	13N	25E	179.37	717.49	1,848.49	0.0	AFA	40
108 N12 E25 11BCDC1	65754	PER	IRR	SNYDER LIVESTOCK COMPANY	SW	NW	11	12N	25E	128.10	512.40	3,444.40	100.2	AFA	41
108 N12 E25 10CDDDI	65755	PER	IRR	SNYDER LIVESTOCK COMPANY	SE	SW	10	12N	25E	393.00	1,572.00		254.0	AFA	41
108 N15 E25 34ABDD1	65777	PER	IRR	DESERT PEARL FARMS	SW	NE	34	15N	25E	29.17	116.67	300.00	0.0	AFA	42
108 N15 E25 34ABDD1	65778	PER	IRR	DESERT PEARL FARMS	SW	NE	34	15N	25E	37.33	149.33		0.0	AFA	42
108 N15 E25 34ABDD1	65779	PER	IRR	DESERT PEARL FARMS	SW	NE	34	15N	25E	8.50	34.00		0.0	AFA	42

MASON VALLEY 2011 GROUNDWATER PUMPAGE BY APPLICATION NUMBER																
UNIQUE ID	APP NO.	STATUS	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER. ACRES	DUTY (AF)	SUPP	DUTY	UNITS	SUP GW APP NO.	
												ADJ	USED			
108 N14 E24 12ABAA1	66038	PER	COM	LIGTENBERG FAMILY TRUST	NW	NE	12	14N	24E		38.48	267.35	372.5	AFA	43	
108 N14 E24 12ACAA1	66039	PER	COM	LIGTENBERG ROGER & JOANNE	SW	NE	12	14N	24E		21.79		10.1	AFA	43	
108 N14 E26 19CB 1	66112	PER	COM	SUNRISE RANCH, LLC	NW	SW	19	14N	26E		36.00		14.3	AFA	44	
108 N14 E24 12ACDD1	66193	PER	COM	LIGTENBERG ROGER & JOANNE	SW	NE	12	14N	24E		89.42		89.4	AFA	43	
108 N13 E25 04AABB1	66303	PER	IRR	DESERT PEARL FARMS	NE	NE	4	13N	25E	25.00	100.00		0.0	AFA		
108 N12 E25 03CADD1	66831	PER	IRR	SNYDER, LUCY A.	NE	SW	3	12N	25E	152.00	608.00		832.8	AFA	41	
108 N12 E25 15DBAA2	66832	PER	IRR	EDDIE R. & THERESA SNYDER TRUST	NW	SE	15	12N	25E	188.00	752.00		165.0	AFA	41	
108 N14 E26 26BDDDI	66896	PER	IRR	HAYDEN, LELAND D.	SE	NW	26	14N	26E	7.00	27.98		24.4	AFA	4	
108 N13 E26 18DBBC1	66898	PER	IRR	FRADE RANCHES, INC.	NW	SE	18	13N	26E	272.86	1,091.43		934.9	AFA	19	
108 N13 E28 18ACCB1	66900	PER	IRR	FRADE RANCHES, INC.	SW	NE	18	13N	26E	96.60	386.40		386.4	AFA	19	
108 N14 E25 33CDCD1	67034	PER	IRR	DESERT PEARL FARMS	SE	SW	33	14N	25E	101.36	405.42		0.0	AFA	40	
108 N14 E24 12ACDD1	67035	PER	COM	LIGTENBERG FAMILY TRUST	SW	NE	12	14N	24E		36.00		118.1	AFA	43	
108 N14 E25 33CDCD2	67202	PER	IRR	DESERT PEARL FARMS	SE	SW	33	14N	25E	304.35	1,217.41		0.0	AFA	40	
108 N14 E25 33CDCD2	67203	PER	IRR	DESERT PEARL FARMS	SE	SW	33	14N	25E	185.88	743.52		0.0	AFA	40	
108 N13 E25 04AABB1	67204	PER	IRR	DESERT PEARL FARMS	NE	NE	4	13N	25E	262.44	1,049.76		0.0	AFA	40	
108 N12 E25 11CCDC1	67210	PER	IRR	SUNRISE RANCH, LLC	SW	SW	11	12N	25E	57.50	230.00		0.0	AFA	39	
108 N12 E25 11CCDC1	67599	PER	IRR	SUNRISE RANCH, LLC	SW	SW	11	12N	25E	9.07	36.28		0.0	AFA	39	
108 N14 E25 16DDAB1	67947	PER	IRR	JOHN & LEONA HEIMERMAN F. TRUST	SE	SE	16	14N	25E	16.03	64.12			AFA		
108 N14 E25 10ADDI1	68003	PER	IRR	MASINI INVESTMENTS	SE	NE	10	14N	25E	34.83	139.32		0.0	AFA	37	
108 N14 E25 08DCCC1	68004	PER	IRR	DESERT PEARL FARMS	SW	SE	8	14N	25E	525.17	2,100.68	2,620.82	675.9	AFA	45	
108 N13 E25 36BADDI	68005	PER	IRR	DESERT PEARL FARMS	NE	NW	36	13N	25E	0.91	3.64		0.0	AFA		
108 N14 E25 08DCCC1	68006	PER	IRR	DESERT PEARL FARMS	SW	SE	8	14N	25E	77.09	308.36		0.0	AFA	45	
108 N13 E25 04AABB1	68007	PER	IRR	DESERT PEARL FARMS	NE	NE	4	13N	25E	13.21	52.85		0.0	AFA		
108 N14 E25 07DDDI1	68008	PER	IRR	DESERT PEARL FARMS	SE	SE	7	14N	25E	621.42	2,485.68		735.2	AFA	45	
108 N14 E25 16DACA1	68055	PER	IRR	CLARENCE J. MOREDA FAMILY TRUST	NE	SE	16	14N	25E	5.02	20.08		16.2	AFA		
108 N13 E26 05AABC1	68308	18177	STK	CIRCLE BAR N RANCH	NE	NE	5	13N	26E		5.60		5.6	AFA		
108 N13 E26 05DBCD1	68309	PER	IRR	CIRCLE BAR N RANCH	NW	SE	5	13N	26E	10.41	41.64	125.60	0.0	AFA	46	
108 N13 E26 05DBCD1	68310	PER	IRR	CIRCLE BAR N RANCH	NW	SE	5	13N	26E	18.94	75.76		0.0	AFA	46	
108 N13 E26 05DBCD1	68311	PER	IRR	CIRCLE BAR N RANCH	NW	SE	5	13N	26E	2.05	8.20		0.0	AFA	46	
108 N12 E25 11CCDC1	68312	PER	IRR	FARETTO FAMILY 1996 TRUST	SW	SW	11	12N	25E	88.75	354.98		0.0	AFA	39	
108 N14 E25 03DDDD2	68398	PER	IRR	L & M FAMILY LIMITED PARTNERSHIP	SE	SE	3	14N	25E	114.14	456.56	456.56	0.0	AFA	47	
108 N14 E25 11ACDC1	68399	PER	IRR	L & M FAMILY LIMITED PARTNERSHIP	SE	NE	11	14N	25E	153.00	612.00		4.0	AFA	37	
108 N14 E25 03DDDD2	68400	PER	IRR	L & M FAMILY LIMITED PARTNERSHIP	SE	SE	3	14N	25E	114.14	456.56		0.0	AFA	47	
108 N14 E25 11ACDC1	68401	PER	IRR	L & M FAMILY LIMITED PARTNERSHIP	SE	NE	11	14N	25E	58.83	235.32		0.0	AFA	37	
108 N13 E25 28ABDC1	68629	PER	QM	TIBBALS FAMILY TRUST AGREEMENT	NW	NE	28	13N	25E		1.00			AFA	32	
108 N13 E25 16DD 1	68630	PER	IRR	THE TIBBALS FAMILY TRUST AGREEMENT	SE	SE	16	13N	25E	0.50	2.00		2.0	AFA		
108 N14 E26 22AAAD1	68715	PER	IRR	SUNRISE RANCH, LLC	NE	NE	22	14N	26E	20.60	82.40		82.4	AFA	5	
108 N13 E25 14CADD1	69120	PER	MUN	YERINGTON-CITY	NE	SW	14	13N	25E		361.98		0.0	AFA	38	
108 N13 E25 14CADD1	69121	PER	MUN	YERINGTON-CITY	NE	SW	14	13N	25E		723.97		0.0	AFA	38	
108 N13 E25 15DBDD1	69122	PER	MUN	YERINGTON-CITY	NW	SE	15	13N	25E		1,085.96		0.0	AFA	38	
108 N13 E25 01DBCC2	69185	PER	IRR	BARBER, S. MORGAN & HARRIET	NW	SE	1	13N	25E	22.83	91.32	111.72	0.0	AFA	48	
108 N13 E25 01DBCC2	69186	PER	IRR	BARBER, S. MORGAN & HARRIET	NW	SE	1	13N	25E	8.70	34.80		0.0	AFA	48	
108 N13 E25 01DBCC2	69187	PER	IRR	BARBER, S. MORGAN & HARRIET	NW	SE	1	13N	25E	8.70	34.80		0.0	AFA	48	
108 N13 E25 12BDDCI	69390	PER	IRR	CIRCLE BAR N RANCH	SE	NW	12	13N	25E	101.99	407.96		12.5	AFA		
108 N14 E25 06CCCC1	70112	PER	IRR	BRYAN MASINI CHILDRENS TRUST	SW	SW	6	14N	25E	85.09	340.34		462.4	AFA	36	
108 N14 E25 25CABA1	70229	PER	IRR	EWERT FAMILY 1995 TRUST	NE	SW	25	14N	25E	12.13	48.50	200.50	5.7	AFA	49	
108 N14 E25 25CABA1	70230	PER	IRR	EWERT FAMILY 1995 TRUST	NE	SW	25	14N	25E	38.00	152.00		0.0	AFA	49	
108 N13 E25 28ABDC1	70397	PER	QM	TIBBALS FAMILY TRUST AGREEMENT	NW	NE	28	13N	25E		2.00		0.0	AFA	32	
108 N13 E25 16DD 1	70398	PER	QM	TIBBALS FAMILY TRUST AGREEMENT	SE	SE	16	13N	25E		1.00		593.1	AFA	32	
108 N13 E25 15BCBD1	70911	PER	IRR	TIBBALS FAMILY TRUST AGREEMENT	SW	NW	15	13N	25E	1.00	4.00		37.3	AFA		
108 N13 E25 23ABBB1	71069	18003	IRR	RICHARD H. BRYAN & NIKKI A. BRYAN	NW	NE	23	13N	25E	1.75	7.00		9.9	AFA		
108 N14 E25 25CABA1	71092	PER	IRR	EWERT FAMILY 1995 TRUST, LEWIS A. & BEVERLY J. EWERT, T	NE	SW	25	14N	25E	25.00	100.00		0.0	AFA		
108 N13 E25 14CADD1	71410	PER	MUN	WILLOWCREEK G.I.D.	NE	SW	14	13N	25E		19.10		0.0	AFA	38	
108 N13 E25 14CADD1	71411	PER	MUN	WILLOWCREEK G.I.D.	NE	SW	14	13N	25E		377.47		0.0	AFA	38	
108 N13 E25 15DBDD1	71412	PER	MUN	WILLOWCREEK G.I.D.	NW	SE	15	13N	25E		19.10		0.0	AFA	38	
108 N13 E25 15DBDD1	71413	PER	MUN	WILLOWCREEK G.I.D.	NW	SE	15	13N	25E		377.47		0.0	AFA	38	
108 N15 E25 34CCCC1	71553	PER	IRR	LAWRENCE C. MASINI RANCH	SW	SW	34	15N	25E	75.20	300.80		306.2	AFA	30	

MASON VALLEY 2011 GROUNDWATER PUMPAGE BY APPLICATION NUMBER																
UNIQUE ID	APP NO.	STATUS	MOU	OWNER OF RECORD	QQ	QTR	SEC	T	R	PER. ACRES	DUTY (AF)	SUPP	DUTY	UNITS	SUP GW APP NO.	
												ADJ	USED			
108 N13 E26 09ABC1	72107	18665	COM	WERNER, KURT M & NANCY	NW	NE	9	13N	26E		0.61		0.5	AFA		
108 N12 E25 14CDCB1	72131	PER	IRR	MICA FARMS, LLC	SE	SW	14	12N	25E	220.20	880.80		23.2	AFA	7	
108 N12 E25 14CDCB1	72402	PER	IRR	PEAVINE LEASING, LLC	SE	SW	14	12N	25E	43.81	175.22		0.0	AFA	7	
108 N14 E25 16DDDA1	72637	PER	IRR	HISKETT, CARL WILLIAM & PHILLIS ANN	SE	SE	16	14N	25E	8.15	32.60		22.0	AFA		
108 N11 E25 10DDDD1	73373	PER	IRR	GUILD, CATHERINE L.	SE	SE	10	11N	25E	36.00	144.00		289.2	AFA		
108 N14 E26 22AAAD1	73810	PER	IRR	SUNRISE RANCH, LLC	NE	NE	22	14N	26E	0.37	1.47		1.5	AFA	5	
108 N14 E26 22AAAD1	73811	PER	IRR	SUNRISE RANCH, LLC	NE	NE	22	14N	26E	79.75	319.00		2.6	AFA	5	
108 N14 E26 22AAAD1	73812	PER	IRR	SUNRISE RANCH, LLC	NE	NE	22	14N	26E	13.42	53.69		0.0	AFA	5	
108 N12 E25 22ADD1	73859	PER	IRR	BORSINI RANCH, INC.	SE	NE	22	12N	25E	2.25	9.00		0.0	AFA	27	
108 N14 E26 30BCDD1	74228	PER	IRR	MICA FARMS LLC	SW	NW	30	14N	26E	80.00	320.00	512.59	320.0	AFA	50	
108 N14 E26 34DDAC1	74255	PER	IRR	TPKW FAMILY LIMITED PARTNERSHIP	SE	SE	34	14N	26E	1.99	7.96		0.0	AFA		
108 N14 E26 30BCDD1	75048	PER	IRR	MICA FARMS LLC	SW	NW	30	14N	26E	88.95	355.80		283.0	AFA	50	
108 N13 E25 36CCDD1	75610	PER	QM	JASON CORPORATION	SW	SW	36	13N	25E		84.00	84.00	17.2	AFA	51	
108 N13 E25 36CCDD1	75611	PER	QM	JASON CORPORATION	SW	SW	36	13N	25E		84.00		0.0	AFA	51	
108 N13 E25 36CCDD1	75612	PER	QM	JASON CORPORATION	SW	SW	36	13N	25E		84.00		0.0	AFA	51	
108 N12 E25 22ADD1	75674	PER	IRR	BORSINI RANCH, INC.	SE	NE	22	12N	25E	30.00	120.00		0.0	AFA		
108 N14 E26 20CDC1	76181	PER	IRR	DAVID M. LITTLE FAMILY TRUST AGREEMENT	SE	SW	20	14N	26E	30.75	123.00	191.28	51.6	AFA	52	
108 N14 E26 20CDC1	76182	PER	IRR	DAVID M. LITTLE FAMILY TRUST AGREEMENT	SE	SW	20	14N	26E	10.82	43.28		0.0	AFA	52	
108 N12 E25 33ACAC1	76192	PER	IRR	SUNRISE RANCH, LLC	SW	NE	33	12N	25E	9.00	36.00		AFA			
108 N12 E25 22BBCD1	76201	PER	IRR	STEVEN M. DRAPER AND JENNIFER DRAPER	NW	NW	22	12N	25E	2.00	8.00	24.80	0.0	AFA	53	
108 N12 E25 22BBCD1	76202	PER	IRR	STEVEN M. DRAPER AND JENNIFER DRAPER	NW	NW	22	12N	25E	4.20	16.80		0.0	AFA	53	
108 N14 E25 06CCCC1	76215	PER	COM	DESERT HILLS DAIRY, LLC	SW	SW	6	14N	25E		81.66		81.7	AFA	43	
108 N14 E25 06CCCC1	76216	PER	COM	DESERT HILLS DAIRY, LLC	SW	SW	6	14N	25E		81.66		0.0	AFA	43	
108 N14 E26 20CDC1	76301	PER	IRR	DAVID M. LITTLE FAMILY TRUST AGREEMENT	SE	SW	20	14N	26E	6.25	25.00		0.0	AFA	52	
108 N13 E25 26BCBD1	76321	18264	IRR	MIKE BOBRICK	SW	NW	26	13N	25E	1.58	6.31		0.9	AFA		
108 N13 E26 18ACCB1	76432	PER	IRR	FRADE RANCHES INC.	SW	NE	18	13N	26E	12.20	48.80		48.8	AFA	19	
108 N13 E26 18ACCB1	76433	PER	IRR	FRADE RANCHES INC.	SW	NE	18	13N	26E	3.40	13.60		13.6	AFA	19	
108 N13 E26 18ACCB1	76434	PER	IRR	FRADE RANCHES INC.	SW	NE	18	13N	26E	45.64	182.57		299.8	AFA	19	
108 N12 E25 21DADC1	76603	PER	IRR	NORDYKE PROPERTIES, LLC	NE	SE	21	12N	25E	100.00	400.00	400.00	0.0	AFA	54	
108 N13 E26 02BABC1	76751	PER	IRR	GARY AND BEVERLY HANSON FAMILY TRUST	NW	NW	2	13N	26E	6.49	25.96		11.4	AFA		
108 N12 E25 21DADC1	76811	PER	IRR	NORDYKE PROPERTIES, LLC	NE	SE	21	12N	25E	100.00	400.00		0.0	AFA	54	
108 N12 E25 21DADC1	76812	PER	IRR	NORDYKE PROPERTIES, LLC	NE	SE	21	12N	25E	100.00	400.00		0.0	AFA	54	
108 N13 E26 06DCAB1	77005	PER	QM	CIRCLE BAR N RANCH	SW	SE	6	13N	26E		4.48		4.5	AFA		
108 N12 E26 02ACCA1	77103	PER	MM	RGGS LAND & MINERALS, LTD., L.P., A DELAWARE LIMITED PA	SW	NE	2	12N	26E		693.97		0.0	AFA		
108 N12 E26 04BAAA1	77104	PER	MM	NEVADA COPPER, INC.	NE	NW	4	12N	26E		18.31	18.31	26.1	AFA	55	
108 N12 E26 04BAAA1	77105	PER	MM	NEVADA COPPER, INC.	NE	NW	4	12N	26E		18.31		0.0	AFA	55	
108 N13 E25 12BDDC1	77681	PER	IRR	CIRCLE BAR N RANCH	SE	NW	12	13N	25E	3.58	14.30	947.94	0.0	AFA	56	
108 N13 E25 12BDDC1	77682	PER	IRR	CIRCLE BAR N RANCH	SE	NW	12	13N	25E	193.91	775.64		0.0	AFA	56	
108 N13 E25 12BDDC1	77683	PER	IRR	CIRCLE BAR N RANCH	SE	NW	12	13N	25E	41.50	166.00		0.0	AFA	56	
108 N14 E26 30BCDD1	77719	PER	IRR	SUNRISE RANCH, LLC	SW	NW	30	14N	26E	38.40	153.59		0.0	AFA	50	
108 N13 E25 14CADD1	78035	PER	QM	YERINGTON-CITY	NE	SW	14	13N	25E		20.26		0.0	AFA	38	
108 N13 E25 14CADD1	78036	PER	QM	YERINGTON-CITY	NE	SW	14	13N	25E		18.29		0.0	AFA	38	
108 N13 E25 14CADD1	78037	PER	QM	YERINGTON-CITY	NE	SW	14	13N	25E		2.24		0.0	AFA	38	
108 N13 E25 15DBDD1	78038	PER	QM	YERINGTON-CITY	NW	SE	15	13N	25E		145.71		0.0	AFA	38	
108 N13 E25 15DBDD1	78039	PER	QM	YERINGTON-CITY	NW	SE	15	13N	25E		2.24		0.0	AFA	38	
108 N12 E26 06AAC2	78248	PER	IRR	THOMAS C AND MAROLYN B PATTON FAMILY TRUST AGREEM	NE	NE	6	12N	26E	2.50	10.00		0.0	AFA		
108 N14 E26 33DDDC1	78492	PER	COM	MASON VALLEY TRAP CLUB	SE	SE	33	14N	26E		1.58		AFA			
108 N15 E25 32ACCB1	79492	PER	IRR	DESERT PEARL FARMS	SW	NE	32	15N	25E	195.63	782.51		AFA		10	
108 N13 E25 34DDCD1	80078	PER	IRR	DESERT PEARL FARMS LLC	SE	SE	34	13N	25E	206.00	824.00		636.7	AFA	17	
108 N14 E26 19CB 2	80920	PER	COM	SUNRISE RANCH LLC	NE	SW	19	14N	26E		20.00		28.1	AFA	44	
108 N14 E24 01ADCC1	79845T	PER	IRR	BREAK A HEART LLC	SE	NE	1	14N	24E	282.72	1,130.86		1,130.9	AFA		
108 N14 E25 07BAAA1	79846T	PER	IRR	BREAK A HEART LLC	NE	NW	7	14N	25E	34.72	138.88		138.9	AFA		
108 N14 E26 18BBDA1	79863T	PER	IRR	WILDLIFE DIVISION-NEVADA	NW	NW	18	14N	26E	105.80	423.20		21.4	AFA		
108 N12 E26 02DABC1	79980T	PER	MM	RGGS LAND AND MINERALS LTD LP	NE	SE	2	12N	26E		361.99		0.0	AFA		
108 N11 E25 01ABDD1	80077T	PER	IRR	PEAVINE LEASING LLC	NW	NE	1	11N	25E	24.70	98.78		30.1	AFA		
108 N14 E24 23DDDAB1	81040T	PER	MM	SINGATSE PEAK SERVICES LLC	SE	SE	23	14N	24E		15.00		10.0	AFA		

MASON VALLEY 2011 GROUNDWATER PUMPAGE BY APPLICATION NUMBER

Supplemental Groundwater Groups:

¹ 12389, 30517, 30518
² 13595, 21921, 51768
³ 14109, 14111, 15424, 18410, 18411, 23793, 25399, 61449
⁴ 15946, 66896
⁵ 16034, 29299, 30447, 68715, 73810, 73811, 73812
⁶ 18588, 18589
⁷ 18654, 72131, 72402
⁸ 18676, 19068
⁹ 18707, 56020, 60763, 60764
¹⁰ 18729, 25201, 30409, 51014, 79492
¹¹ 18766, 58352
¹² 18867, 57247
¹³ 18925, 30169, 60704
¹⁴ 19057, 25892
¹⁵ 19113, 28195
¹⁶ 19706, 30396
¹⁷ 19829, 80078
¹⁸ 24013, 30521
¹⁹ 25633, 48616, 66898, 66900, 76432, 76433, 76434
²⁰ 26311, 26312, 61575
²¹ 28067, 56251
²² 45408, 45411, 45412, 57576
²³ 45409, 45410, 45413
²⁴ 49250, 54419, 57261, 57262
²⁵ 50704, 60557, 60558, 60559, 60560, 60561, 60562, 64604, 64606, 64607, 64608, 64609, 64610, 64611
²⁶ 45594, 45595, 51100
²⁷ 55955, 58166, 58168, 73859
²⁸ 56594, 56595, 56596, 56597, 56598, 56599
²⁹ 58481, 58482
³⁰ 58752, 58753, 58755, 58756, 58757, 58758, 58759, 71553
³¹ 60553, 60554, 60555, 60556
³² 60702, 61718, 68629, 70397, 70398
³³ 61207, 61208
³⁴ 61592, 61593
³⁵ 61681, 62252
³⁶ 65209, 65210, 65211, 70112
³⁷ 65262, 65263, 65264, 65265, 68003, 68339, 68401
³⁸ 65296, 65297, 65298, 65299, 65300, 65302, 65303, 65358, 69120, 69121, 69122, 71410, 71411, 71412, 71413, 78035, 78036, 78037, 78038, 78039
³⁹ 65384, 67210, 67599, 68312
⁴⁰ 65724, 67034, 67202, 67203, 67204
⁴¹ 65754, 65755, 66831, 66832
⁴² 65777, 65778, 65779
⁴³ 66038, 66039, 66193, 67035, 76215, 76216
⁴⁴ 66112, 80920
⁴⁵ 68004, 68006, 68008
⁴⁶ 68309, 68310, 68311
⁴⁷ 68398, 68400
⁴⁸ 69185, 69186, 69187
⁴⁹ 70229, 70230
⁵⁰ 74228, 75048, 77719
⁵¹ 75610, 75611, 75612
⁵² 76181, 76182, 76301
⁵³ 76201, 76202
⁵⁴ 76603, 76811, 76812
⁵⁵ 77104, 77105
⁵⁶ 77681, 77682, 77683

APPENDIX C

MASON VALLEY HISTORICAL PUMPAGE BY POINT OF DIVERSION

HISTORICAL GROUNDWATER USE BY POINT OF DIVERSION												
UNIQUE IDENTIFIER	PERMITS	MOU	OWNER OF RECORD	DUTY USED 2005	DUTY USED 2006	DUTY USED 2007	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011	NOTES	
108 N11 E25 31AA 1	15825	MM	RINK, RUTH KLINSTIVER					0.0	0.0	0.0	1	
108 N11 E25 01ABDD1	18715, 80077T	IRR	JOHN R. HARGUS & ADAH M. BLINN TRUST	95.3	78.4	726.1	548.0	211.8	128.1	30.1		
108 N11 E25 01ACCB1	56020, 60763	IRR	LEE IVEY RANCH, INC.	49.0	655.6	910.4	992.8	1,021.0	847.9	761.4		
108 N11 E25 01ADCD1	18707, 60764	IRR	LEE IVY RANCHES, INC.	0.0	0.0	488.0	310.6	230.0	216.1	0.0		
108 N11 E25 01BC 1	13911	STK	MINISTER, B.E.					0.0	0.0	0.0	1	
108 N11 E25 01CCDD1	30517, 49250, 54419	IRR	FORREST G. GODDE 1998 TRUST	2.1	68.8	303.8	241.9	811.4	255.8	413.6		
108 N11 E25 02CDDDD1	30518	IRR	DELANEY, BARRY F. & DEBORAH	319.1	195.8	105.4	87.3	25.2	98.0	125.9		
108 N11 E25 10CDCC1	28042	IRR	FIETTA, PATRICIA	255.6	234.6	49.1	91.6	264.6	31.0	12.3		
108 N11 E25 10DBCA1	19758	IRR	SCATENA, CHETI	308.6	61.0	1,234.9	1,179.8	1,064.7	631.4	157.3		
108 N11 E25 10DBCA2	62833	COM	LYON COUNTY-ELM TREE CEMETERY	0.9	0.9	0.9	0.9	0.9	0.9	0.1		
108 N11 E25 10DCCC1	61882	IRR	DRAPER, STEVEN M. & JENNIFER	247.5	220.9	236.1	179.9	10.0	74.2	205.2		
108 N11 E25 10DDDD1	73373	IRR	GUILD, CATHERINE L.					213.6	40.0	289.2	1	
108 N11 E25 11ACAA1	12389	IRR	FORREST G. GODDE 1998 TRUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
108 N11 E25 11ACAB1	57261, 57262	IRR	FORREST G. GODDE 1998 TRUST	44.1	24.5	596.2	693.9	441.4	46.4	29.3		
108 N11 E25 11BCDD1	19935	IRR	CAPURRO, ROBERT STEVE AND JANICE ELIZAB	156.7	93.6	347.2	258.0	588.1	365.6	55.0		
108 N11 E25 14BBBB1	61894	STK	USFS	0.0	0.0	0.0	0.0	0.0	4.7	4.7		
108 N11 E26 04BADD1	57576	STK	PITCHFORK RANCH, INC.	0.0	0.0	0.0	0.0	9.9	0.1	0.0		
108 N11 E26 04BB 1	45413	QM	PITCHFORK RANCH INC.	3.3	3.3	3.3	3.3	3.3	3.3	3.3		
108 N11 E26 04BB 1	45411	STK	PITCHFORK RANCH INC.	6.4	6.4	6.4	6.4	6.4	6.4	6.4		
108 N11 E26 20BD 1	46831	STK	FULSTONE, BARTON							0.0	2	
108 N11 E26 33CA 1	46830	STK	FULSTONE, BARTON	6.7	6.7	6.7	6.7	6.7	6.7	6.7		
108 N12 E25 01AADD1	58482	IRR	THE SMITH LIVING TRUST DATED OCTOBER 20	409.7	413.6	450.3	395.3	290.6	394.8	567.2		
108 N12 E25 01BDDDI	28195	IRR	DESERT PEARL FARMS	531.5	266.4	1,062.3	1,188.5	762.6	662.6	962.1		
108 N12 E25 01DACC1	58481	IRR	RODERICK, JOSEPH E.	207.8	195.0	218.5	186.5	30.4	30.4	198.6		
108 N12 E25 01DDCD1	28194	IRR	GIORGIO LYNDY HUNEWILL	123.1	40.1	393.3	342.0	220.7	146.0	183.0		
108 N12 E25 02DBDD1	19113	IRR	R. N. FULSTONE COMPANY	363.0	149.3	309.6	720.6	495.2	672.3	437.5		
108 N12 E25 03BCDC1	19828, 60495	IRR	SCEIRINE, E. J. & JOS. & DAVID	93.0	37.9	491.3	426.9		240.1	258.3	3	
108 N12 E25 03BCDC2	19828, 60495	IRR	SCEIRINE, E. J. & JOS. & DAVID							0.0	3	
108 N12 E25 03CADD1	66831	IRR	SNYDER, LUCY A.	565.9	0.1	315.4	944.0	78.2	800.8	832.8		
108 N12 E25 03CDAD1	63192	QM	SNYDER LIVESTOCK COMPANY					0.3	2.1	4		
108 N12 E25 08DCAA1	59847	STK	F.I.M. CORP.	1.3	1.3	1.3	1.3	1.3	1.3	1.3		
108 N12 E25 10CDDDD1	65755	IRR	SNYDER LIVESTOCK COMPANY	348.1	77.0	344.8	320.7	437.0	335.0	254.0		
108 N12 E25 11AABB1	56251	IRR	MENESINI, RONALD D. & CYNTHIA L.	124.7	125.5	556.0	563.6	405.1	325.8	151.8		
108 N12 E25 11AADC1	28067	IRR	MENESINI, RONALD D. & CYNTHIA L.	62.1	11.9	360.0	317.0	256.3	178.4	42.6		
108 N12 E25 11BCDC1	30396, 65754	IRR	SNYDER LIVESTOCK COMPANY, INC.	228.7	49.6	574.9	464.0	203.0	378.8	140.2		
108 N12 E25 11CADD1	19706	IRR	CHASE, HELEN B.	354.3	13.6	959.8	869.7	495.5	723.6	243.7		
108 N12 E25 11CCDC1	65584, 67210, 67599, 68312	IRR	ANDERSON FAMILY 1992 TRUST	273.4	725.9	777.6	577.1	457.9	310.2	16.0		
108 N12 E25 12BADA1	30287	IRR	PURSEL, MELVIN E.	85.8	295.9	455.0	362.8	206.6	11.4	1.0		
108 N12 E25 12BCAD1	58352	IRR	LEE, THOMAS WILLIAM	66.4	312.5	195.2	308.4	218.3	153.9	145.7		
108 N12 E25 12BDDDI	18766, 29621	IRR	LEE, HARRY A.	89.1	107.9	389.2	332.8	316.9	292.6	110.7		
108 N12 E25 12CDAA1	28268	IRR	BAR KEYSTONE RANCH LLC	55.4	0.0	154.0	181.5	66.2	19.7	0.0		
108 N12 E25 12DCCC1	30520	IRR	PELLEGRINI, STEVE	3.6	5.1	5.4	5.3	5.7	5.9	4.6		
108 N12 E25 13CABD1	47013	IRR	RAUBER INLOW TRUST	0.0	0.0	0.0	40.3	0.0	0.0	0.0		
108 N12 E25 13CDDB1	47014	IRR	GUSSENHOVEN, JOYCE L.	16.9	16.6	11.0	0.0	0.0	0.0	0.0		
108 N12 E25 14CDBC1	72131, 72402	IRR	MICA FARMS, LLC			894.5	1,280.7	1,150.1	919.8	23.2		
108 N12 E25 14DCAA1	18914	IRR	MICA FARMS, LLC	48.0	0.0	0.0	0.0	0.0	0.0	0.0	5	
108 N12 E25 14DDBB1	18654	IRR	MICA FARMS, LLC	80.2	0.9	259.0	158.2	148.0	118.6	299.1		
108 N12 E25 15DBAA1	66832	IRR	EDDIE R. & THERESA SNYDER TRUST	5.8	65.7	0.0					6	
108 N12 E25 15DBAA2	66832	IRR	EDDIE R. & THERESA SNYDER TRUST	0.0		73.5	0.0	0.0	0.0	165.0	6	
108 N12 E25 21DADC1	76603, 76811, 76812	IRR	NORDYKE PROPERTIES, LLC				279.5	161.7	0.0	0.0	7	
108 N12 E25 22ADD1	55955, 58166, 58168, 73859, 75674	IRR	BORSINI RANCH, INC.	85.8	1.1	409.0	439.8	328.5	215.0	0.0		
108 N12 E25 22BBCD1	76201, 76202	IRR	STEVEN M. DRAPER AND JENNIFER DRAPER				0.0	0.0	0.0	0.0	8	

HISTORICAL GROUNDWATER USE BY POINT OF DIVERSION												
UNIQUE IDENTIFIER	PERMITS	MOU	OWNER OF RECORD	DUTY USED 2005	DUTY USED 2006	DUTY USED 2007	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011	NOTES	
108 N12 E25 23BDDA1	61592, 61593	IRR	BORSINI RANCH, INC	63.6	280.5	521.0	69.8	0.0	229.3	613.5		
108 N12 E25 23CDDD1	19692	IRR	BORSINI RANCH, INC.	25.7	12.9	223.1	230.5	146.4	44.7	0.0		
108 N12 E25 23DADD1	56594, 56597, 56599	IRR	KELTON, DARON JAY AND SUZANNE C.	27.1	17.0	218.6	208.5	111.5	48.1	57.2		
108 N12 E25 23DADD2	56598	IRR	KELTON, DARON JAY AND SUZANNE C.	84.7	29.2	31.3	51.1	253.9	120.3	125.5		
108 N12 E25 24BBCC1	56595, 56596	IRR	KELTON, DARON JAY AND SUZANNE C.	20.5	0.0	289.5	272.8	227.1	138.0	56.3	9	
108 N12 E25 24BBCC2	56595, 56596	IRR	KELTON, DARON JAY AND SUZANNE C.				0.0	513.6	276.1	56.8	9	
108 N12 E25 24BBCD1	58486	IRR	KELTON, DARON JAY AND SUZANNE C.	4.9	0.0	52.9	39.9	23.6	18.4	44.8		
108 N12 E25 24CCCD1	18753	IRR	HAMER, JOHN MURRAY & MARYANNA, TRUST	62.9	0.1	129.6	565.5	554.2	112.1	8.0		
108 N12 E25 25CDDD1	19057	IRR	BLASCO, JAMES M. FAMILY LTD PRTNRSHP	470.4	404.9	1,046.8	1,286.4	1,224.5	467.5	312.6		
108 N12 E25 27ADDD1	25892	IRR	BLASCO, JAMES M. FAMILY LTD PRTNRSHP	397.6	204.1	1,089.2	959.5	999.6	876.9	237.4		
108 N12 E25 33ACAC1	76192	IRR	SUNRISE RANCH, LLC								47	
108 N12 E25 35DCDD2	13879	IRR	CAROLYN KATES	172.2	115.1	487.0	569.7	540.7	22.7	106.4		
108 N12 E26 02ACCA1	77103	MM	RGGS LAND & MINERALS, LTD., L.P., A DELAWA				0.0	0.0	0.0	0.0	10	
108 N12 E26 02DABC1	79980T	MM	RGGS LAND & MINERALS LTD LP						5.3	0.0	11	
108 N12 E26 04BAAA1	77104, 77105	MM	NEVADA COPPER, INC.						1.4	26.1	12	
108 N12 E26 06AACCI	30092	IRR	EWERT FAMILY 1995 TRUST	0.0							13	
108 N12 E26 06AACC2	30992, 78248	IRR	THOMAS C AND MAROLYN B PATTON FAMILY	0.0	0.0	0.0	0.0	0.0	1.9	1.9	13	
108 N12 E26 06BBDD1	18867	IRR	PUMPKIN HOLLOW FARMS	99.2	26.9	228.2	176.8	431.4	307.0	95.7		
108 N12 E26 06BDCC1	26368	IRR	WILLIAMS/STETLOW A GENERAL PARTNERSH	389.2	118.5	751.6	539.0	478.5	326.2	133.7		
108 N12 E26 06CDBB3	18730	IRR	SANTOS, PAUL J. & CHRISTENA M.	456.6	85.3	586.2	628.4	435.2	376.1	238.1		
108 N12 E26 06CDCB2	30050	IRR	SANTOS, PAUL J. & CHRISTINE M.	145.9	156.3	282.7	494.6	494.8	145.3	17.1		
108 N12 E26 31DBC1	57188	IRR	PITCHFORK RANCH INC.								14	
108 N12 E26 33CB 1	45410	QM	PITCHFORK RANCH INC.	0.8	0.8	0.8	0.8	0.8	0.8	0.8		
108 N12 E26 33CB 1	45408	STK	PITCHFORK RANCH INC.	6.4	6.4	6.4	6.4	6.4	6.4	6.4		
108 N12 E26 33CC 1	45409	QM	PITCHFORK RANCH INC.	2.7	2.7	2.7	2.7	2.7	2.7	2.7		
108 N12 E26 33CC 1	45412	STK	PITCHFORK RANCH INC.	6.4	6.4	6.4	6.4	6.4	6.4	6.4		
108 N12 E27 04CB 1	49413	STK	BLM	2.2	2.2	2.2	2.2	2.2	2.2	2.2		
108 N12 E27 18BCCB1	49835	STK	BLM	2.2	2.2	2.2	2.2	2.2	2.2	2.2		
108 N13 E25 01CCAB1	27302	IRR	AIAZZI, ESTELLE M.				5.8	10.0	6.5	7.3	15	
108 N13 E25 01DBCC2	30259, 69185, 69186, 69187	IRR	DAVID M. LITTLE FAMILY TRUST 5/26/96	243.6	815.8	815.8	1,561.7	874.4	1,119.6	458.2		
108 N13 E25 01DD 1	33522	STK	TAMAGNI, JANICE					0.0	0.0	0.0	1	
108 N13 E25 03AAD1	51939, 58027	IRR	SCEIRINE, E. J. & JOS & DAVID	0.0	94.9	165.7	200.3	437.3	276.2	0.0		
108 N13 E25 04AABB1	65724, 66303, 67204, 68007	IRR	DESERT PEARL FARMS	223.1	135.2	1,124.7	1,178.2	860.7	0.0	0.0		
108 N13 E25 04CB 1	49222	ENV	ATLANTIC RICHFIELD COMPANY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N13 E25 05ADDA1	49223	ENV	ATLANTIC RICHFIELD COMPANY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N13 E25 05BDDA1	23793	MM	SINGATSE PEAK SERVICES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N13 E25 08AABB1	61449	MM	SINGATSE PEAK SERVICES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N13 E25 09BBAA1	18411	MM	SINGATSE PEAK SERVICES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N13 E25 10CACCI	18706	IRR	CIRCLE BAR N RANCH	101.0	133.4	844.2	507.6	362.8	255.3	161.2		
108 N13 E25 11ADBB2	25813	IRR	WALKER RIVER IRRIGATION DISTRICT	0.0	0.0	2,828.6	3,215.7	3,562.1	1,679.7	0.0		
108 N13 E25 12BDDC1	69390, 77681, 77682, 77683	IRR	CIRCLE BAR N RANCH			732.6	815.9	694.2	615.0	12.5	17	
108 N13 E25 12CDCB1	35867	REC	LYON COUNTY	2.0	2.0	2.0	2.0	2.0	2.0	2.0		
108 N13 E25 13ACCC1	19873	IRR	DEGROOT FAMILY TRUST DATED 6-7-93	667.5	73.3	830.6	1,120.2	940.9	779.6	398.8		
108 N13 E25 13CCCD1	19841	IRR	SCIARANI, ARNOLD JR.	72.3	16.6	835.2	1,362.2	1,559.0	365.2	31.9		
108 N13 E25 13DDDD3	18676	IRR	G LAZY B PARTNERSHIP	3.6	0.0	189.3	1,268.3	814.3	325.4	141.1		
108 N13 E25 14CADD1	MULTIPLE	MUN	YERINGTON-CITY	587.1	609.9	861.8	558.0	546.1	527.1	534.1	18	
108 N13 E25 14CCAA1	65297	MUN	YERINGTON-CITY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19	
108 N13 E25 14DCCD1	19744	IRR	LOMMORI, MARIANNA	230.2	268.8	634.5	716.0	592.0	574.0	407.5		
108 N13 E25 15BBCC1	26213	COM	W.&H. OIL COMPANY OF NEVADA	2.0	2.0	2.0	2.0	2.0	2.0	2.0		
108 N13 E25 15BCBD1	70911	IRR	TIBBALS FAMILY TRUST AGREEMENT			4.4	4.3	74.6	38.1	37.3	20	
108 N13 E25 15CCBD1	18703, 57256	IRR	CIRCLE BAR N RANCH	51.2	103.8	806.4	793.2	640.0	522.6	80.4		
108 N13 E25 15DBBD1	65296, 65303, 69122, 71412, 71413, 78038, 78039	MUN	WILLOWCREEK G.I.D.	558.3	605.0	546.8	709.6	727.4	636.5	529.6	21	

HISTORICAL GROUNDWATER USE BY POINT OF DIVERSION												
UNIQUE IDENTIFIER	PERMITS	MOU	OWNER OF RECORD	DUTY USED 2005	DUTY USED 2006	DUTY USED 2007	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011	NOTES	
108 N13 E25 16DD 1	68630	IRR	THE TIBBALS FAMILY TRUST AGREEMENT					254.7	0.0	2.0	1	
108 N13 E25 16DD 1	70398	QM	THE TIBBALS FAMILY TRUST AGREEMENT					1.0		593.1	1	
108 N13 E25 16DDCD1	25399	MM	SINGATSE PEAK SERVICES			99.7	72.8	146.1	146.1	981.8	22	
108 N13 E25 17AABB1	18410	MM	SINGATSE PEAK SERVICES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N13 E25 21ABAD1	14111	MM	SINGATSE PEAK SERVICES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N13 E25 21ADDA1	77111T, 78145T, 79809T	IRR	WALKER RIVER IRRIGATION DISTRICT	0.0	0.0	0.0	209.1	164.0	0.0	0.0		
108 N13 E25 21BA 1	15424	MM	SINGATSE PEAK SERVICES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N13 E25 21BDAD1	14109	MM	SINGATSE PEAK SERVICES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N13 E25 21DA 1	45226	IND	D AND G INVESTMENTS	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
108 N13 E25 21DADC1	10763	STK	SIRI, ODAY AND MASTELLOTTO							0.0	2	
108 N13 E25 21IDDBA1	16892	STK	ISOLA, LOUIS J. AND MORICONI, RALPH							0.0	2	
108 N13 E25 22CBBB1	30926	IRR	JEFFREY J. RIFE AND DEBORAH K. RIFE FAMILY	71.2	71.2	71.2	327.0	562.2	117.8	428.3		
108 N13 E25 22CC 1	54473	IRR	ALDRIDGE, C. FRED			0.0	0.0	0.0	0.0	0.0	22	
108 N13 E25 22CDDD1	65300	MUN	YERINGTON-CITY	229.2	243.9	269.9	180.0	152.3	29.2	0.0	23	
108 N13 E25 23ABBB1	71069	IRR	RICHARD H. BRYAN & NIKKI A. BRYAN				7.0	6.4	7.4	9.9	15	
108 N13 E25 23DDDC1	19667	IRR	FRADE RANCHES, INC.	23.8	0.0	768.1	550.5	1,348.6	82.5	0.8		
108 N13 E25 24ACBB1	19068	IRR	BITLER FAMILY TRUST, KEN & PEGGY	0.4	0.8	69.5	1,121.5	914.0	364.7	1,038.1		
108 N13 E25 24BBD 1	62252	COM	FRADE RANCHES, INCORPORATED	35.0	35.0	35.0	35.0	35.0	35.0	35.0		
108 N13 E25 24BBD 1	61681	STK	FRADE RANCHES, INCORPORATED	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
108 N13 E25 24BCCC1	19101, 25633	IRR	FRADE RANCHES INC.	925.9	870.7	1,798.8	1,492.6	1,387.3	1,415.5	1,149.7		
108 N13 E25 24CD 1	53028	STK	FRADE RANCHES, INC.							3.7	2	
108 N13 E25 25BACC1	38153	QM	LYON COUNTY								16	
108 N13 E25 25CC 1	14377	DOM	UGO GIORGI AND SONS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24	
108 N13 E25 25CDCC1	57247	IRR	PUMPKIN HOLLOW FARMS	370.1	102.4	569.1	491.3	791.3	249.2	379.9		
108 N13 E25 25CDDA2	18866	STK	GIORG, BALDO							0.0	2	
108 N13 E25 26BCBD1	76321	IRR	MIKE BOBRICK						6.5	0.9	25	
108 N13 E25 26BDCC1	30439	IRR	QUILICI, ANGELO	595.6	392.7	555.1	693.5	547.6	426.6	465.8		
108 N13 E25 26CBDD3	59997	COM	DESERT PEARL FARMS	0.6	1.6	2.1	2.1	1.5	0.0	0.0		
108 N13 E25 26DAAA1	54860, 55676	IRR	DESERT PEARL FARMS	650.2	23.1	612.3	463.7	333.6	442.5	749.0		
108 N13 E25 26DDCC1	30190	IRR	FRASER, GEORGE W.	109.3	161.8	958.6	706.7	310.5	229.4	2.0		
108 N13 E25 27ABAC1	26099, 60553, 60554, 60555, 60556	REC	COTTONWOOD PROPERTY ACQUISITION LLC	184.7	167.5	235.1	141.4	48.7	0.0	0.0		
108 N13 E25 27DCCD2	41363	IRR	BUNKOWSKI, TERRY L. & ALDRIDGE, FRED	475.1	153.7	1,321.7	1,517.3	989.7	795.8	352.4		
108 N13 E25 28ABDC1	60702, 61718, 68629, 70397	QM	TIBBALS, DON H.	293.0	293.0	365.3	279.1	114.0	114.0	150.0		
108 N13 E25 33ABAB1	65299	MUN	YERINGTON-CITY	115.6	36.2	46.8	143.2	168.5	303.6	311.6	26	
108 N13 E25 33CA 1	18588	IRR	FIELDING, WILLIAM AND MELISSA					0.0	0.0	0.0	1	
108 N13 E25 33CA 2	18589	IRR	FIELDING, WILLIAM AND MELISSA					0.0	0.0	0.0	1	
108 N13 E25 33CADD1	22671	DOM	SCHIMPFF, GERTRUDE M.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	27	
108 N13 E25 34CDAB1	30166	IRR	FULSTONE, DAVID H.	188.0	55.5	1,187.1	1,140.3	661.1	468.7	325.2		
108 N13 E25 34DDCD1	80078	IRR	DESERT PEARL FARMS LLC							636.7	28	
108 N13 E25 35BDCC1	30193	IRR	ANDERSEN FAMILY 1992 TRUST, MICHAEL FAR	11.7	0.0	261.5	153.6	66.6	50.2	0.3		
108 N13 E25 35CCDD1	19829	IRR	DESERT PEARL FARMS LLC	172.1	0.0	263.8	956.8	494.0	528.1	264.0		
108 N13 E25 35DBCC1	18682	IRR	MASINI, TONY	62.2	0.3	21.9	172.8	252.1	123.3	119.1		
108 N13 E25 36BADD1	65278, 68005	IRR	PERI, JAMES J.				31.5	23.1	29.3	22.3		
108 N13 E25 36DBBC1	54842, 55677	IRR	DESERT PEARL FARMS	192.2	75.9	690.9	1,000.1		619.3	124.0	29	
108 N13 E25 36CBDD1	30362	IRR	CREMETTI, WILLIAM	602.6	443.9	443.1	437.4	374.1	347.1	384.0		
108 N13 E25 36CCDD1	75610, 75611, 75612	QM	JASON CORPORATION				14.1	13.3	12.3	17.2	30	
108 N13 E25 36DCAA1	18736	IRR	MENESINI, LOUIE	0.0	0.0	440.0	400.4	308.3	168.2	8.8	31	
108 N13 E25 36DCAD1	18736	IRR	MENESINI, LOUIE	444.7							31	
108 N13 E25 36DD 1	14379	DOM	UGO GIORGI AND SONS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24	
108 N13 E26 02BAB1	47672	STK	CIRCLE BAR N RANCH					0.0	0.0	0.0	4	
108 N13 E26 02BBCC1	76751	IRR	GARY AND BEVERLY HANSON FAMILY TRUST	6.5	0.0	0.1	5.5	5.1	8.3	11.4		
108 N13 E26 02BC 1	15975	DOM	HASKINS, CARROL R.								32	

HISTORICAL GROUNDWATER USE BY POINT OF DIVERSION												
UNIQUE IDENTIFIER	PERMITS	MOU	OWNER OF RECORD	DUTY USED 2005	DUTY USED 2006	DUTY USED 2007	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011	NOTES	
108 N13 E26 03CDCBN	31565, 45718, 54391, 59367	QM	CRYSTAL CLEAR WATER CO., LYON CO.	70.4	13.9	0.0	0.0	0.0			33	
108 N13 E26 03CDCBS	41985	QM	CRYSTAL CLEAR WATER CO., LYON CO.	68.5	0.0	0.0	0.0	0.0			33	
108 N13 E26 03DD 1	49093	QM	YEAGLEY, JUNE L.	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
108 N13 E26 04CADD1	30521	IRR	CIRCLE BAR N RANCH	364.6	375.5	821.8	39.1	495.7	621.4	272.8		
108 N13 E26 04DDCA1	48636	QM	TRINITY EVANGELICAL FREE CHURCH	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
108 N13 E26 05AABC1	68308	STK	CIRCLE BAR N RANCH	5.6	5.6	5.6	5.6	5.6	5.6	5.6		
108 N13 E26 05DBCD1	24013, 68309, 68310, 68311	IRR	CIRCLE BAR N RANCH	832.3	245.0	935.0	750.0	470.2	485.0	409.0		
108 N13 E26 05DCBC1	30265	IRR	MCMINN FAMILY TRUST, DATED 5/21/1999	0.0	0.0	0.0					34	
108 N13 E26 05DCBC2	30265	IRR	MCMINN FAMILY TRUST, DATED 5/21/1999				61.9	24.1	0.0	0.0	34	
108 N13 E26 06DCAB1	77005	QM	CIRCLE BAR N RANCH				2.0	2.0	2.0	4.5	35	
108 N13 E26 06DDBB1	19750	IRR	CIRCLE BAR N RANCH	508.5	269.3	898.9	898.0	842.4	937.2	766.0		
108 N13 E26 07ADBC1	30263	IRR	CIRCLE BAR N RANCH	276.1	210.9	507.4	451.0	306.0	348.0	382.2		
108 N13 E26 07BBDD1	30068	IRR	CIRCLE BAR N RANCH	781.1	719.7	1,523.7	1,577.6	852.1	921.5	633.5		
108 N13 E26 08ABCD1	28290	IRR	PETERSON, ANGEL DE'ANNE	119.3	134.6	82.7	104.2	101.0	187.3	80.0		
108 N13 E26 08DCDD1	65001	IRR	DICKEY, CINDA		2.0	2.0	2.0	2.0	2.0	2.0		
108 N13 E26 08DD 1	43168	QM	BLEVINS, CURTIS	1.1	1.1	1.1	1.1	1.1	1.1	1.1		
108 N13 E26 09AACB1	46884	QM	SHATTUCK, LOREN F.	2.2	2.2	2.2	2.2	2.2	2.2	2.2		
108 N13 E26 09ABCC1	72107	COM	WERNER, KURT M & NANCY	0.3	0.6	0.5	0.5	0.5	0.5	0.5		
108 N13 E26 09BADD1	62495	COM	RUBERT, LOTUS R. & PEGGY J.	1.5	1.5	1.5	1.5	1.5	1.5	2.2		
108 N13 E26 09DCBB2	17100	IRR	BEERS FAMILY 2002 TRUST	470.0	470.0	0.0	0.0	0.0	0.0	0.0		
108 N13 E26 16BA 1	41155	QM	MOSS, JIM	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
108 N13 E26 16BA 1	44503	STK	MOSS, JIM							0.0	2	
108 N13 E26 17CBBC1	50668	STK	FRADE RANCHES, INC.		0.0	0.0		0.0	0.0	1.1	36	
108 N13 E26 18ACCB1	66900, 76432, 76433, 76434	IRR	FRADE RANCHES, INC.	867.5	772.4	978.6	158.6	1,274.6	751.4	748.6		
108 N13 E26 18CDDD1	59091	STK	G LAZY B PARTNERSHIP					0.0	0.0	0.0	1	
108 N13 E26 18DBBC1	48616, 66898	IRR	FRADE RANCHES INC.	1,033.3	1,054.2	1,197.5	1,188.8	1,048.3	1,048.3	956.1		
108 N13 E26 31CBBD1	56798	IRR	CHICO FAMILY TRUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
108 N13 E26 31DB 1	14378	DOM	UGO GIORGI AND SONS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24	
108 N13 E26 31CDC1	61249	IRR	CHICO, JAMES V.	0.8	8.9	11.4	8.1	1.0	4.0	6.9		
108 N13 E26 31DDDD2	36330	IRR	COOPER JOHN AND ROBERT	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
108 N13 E26 34BC 1	47649	STK	HILTON, BARRON						0.0	0.0	4	
108 N13 E27 08DB 1	47650	STK	HILTON, BARRON						0.0	0.0	4	
108 N13 E27 32DC 1	49836	STK	BLM						0.0	0.0	4	
108 N14 E24 01ADCC1	65211, 79845T	IRR	BRYAN MASINI CHILDREN'S TRUST	1,338.4	1,346.1	1,562.4	1,462.9	1,125.0	738.2	1,460.2		
108 N14 E24 12ABAA1	66038	COM	LIGTENBERG FAMILY TRUST	187.5	38.5	115.1	272.3	169.0	169.0	372.5		
108 N14 E24 12ACAA1	66039	COM	LIGTENBERG ROGER & JOANNE	106.6		86.2	21.4	22.9	22.9	10.1		
108 N14 E24 12ACDD1	66193, 67035	COM	LIGTENBERG ROGER & JOANNE	281.2	260.9	260.9	260.9	260.9	232.4	207.5		
108 N14 E24 23DDAB1	81040T	MM	SINGATSE PEAK SERVICES LLC							10.0	37	
108 N14 E24 36BC 1	15475	STK	HENSLEY, JACK						0.0	0.0	4	
108 N14 E25 01ADCC1	26312	IND	SPPC	26.9	187.6	1,068.5	1,366.5	1,007.5	1,389.4	1,384.2		
108 N14 E25 02ACDC1	18931	IRR	WILDLIFE DEPARTMENT-NEVADA	237.7	231.1	471.1	1,163.3	148.6	17.0	0.0		
108 N14 E25 03BCDD1	45323	COM	MASINI INVESTMENTS	1.2	2.6	0.5	0.8	1.4	0.9	1.2		
108 N14 E25 03CCCC1	58170	COM	GARCIA, ROGELIO AND CARMAN	0.6	0.6	1.5	0.6	0.3	0.3	0.4		
108 N14 E25 03DDDD2	65262, 65263, 68398, 68400	IRR	LAWRENCE C. MASINI RANCH	171.9	59.0	454.7	873.4	776.5	552.6	254.6		
108 N14 E25 04BDCD2	18729, 25201	IRR	JASON CORPORATION	335.5	415.7	817.1	1,004.3	808.9	418.9	119.4		
108 N14 E25 04CCCC1	30409	IRR	DESERT PEARL FARMS	743.1	554.3	2,414.1	2,279.0	1,927.9	880.0	297.5		
108 N14 E25 04DCAA1	58753	IRR	LAWRENCE C. MASINI RANCH	551.7	755.8	977.9	946.3	690.1	453.9	371.1		
108 N14 E25 05AADD1	51014	IRR	JASON CORP.	437.1	925.1	1,009.2	1,235.2	1,142.5	789.0	391.6		
108 N14 E25 06CCCC1	76215, 76216	COM	DESERT HILLS DAIRY, LLC	81.7	81.7	81.7	81.7	81.7	81.7	81.7		
108 N14 E25 06CCCC1	65209, 70112	IRR	BRYAN MASINI CHILDREN'S TRUST	493.5	413.5	651.5	611.9	647.3	500.5	802.7		
108 N14 E25 06DDCD1	13595	IRR	MOREDA DAIRY					0.0	0.0	0.0	1	
108 N14 E25 06DDDD1	21921, 51768	IRR	MOREDA DAIRY	160.8	159.6	83.1	1,446.8	1,537.8	1,131.4	317.8		

HISTORICAL GROUNDWATER USE BY POINT OF DIVERSION												
UNIQUE IDENTIFIER	PERMITS	MOU	OWNER OF RECORD	DUTY USED 2005	DUTY USED 2006	DUTY USED 2007	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011	NOTES	
108 N14 E25 07BAAA1	65210, 79846T	IRR	BRYAN MASINI CHILDREN'S TRUST	943.2	857.7	624.8	878.4	455.6	764.1	625.7		
108 N14 E25 07DDDD1	68008	IRR	DESERT PEARL FARMS	795.0	907.7	1,368.7	1,048.4	862.9	532.9	735.2		
108 N14 E25 08ADDC1	18735, 27943	IRR	BLAKELY FAMILY LIVING TRUST	394.6	324.3	1,166.9	840.9	709.2	468.3	188.1		
108 N14 E25 08DCCC1	68004, 68006	IRR	DESERT PEARL FARMS	642.5	119.5	1,651.4	1,420.7	1,182.4	903.8	675.9		
108 N14 E25 09DDDD2	19838, 19839, 19840	IRR	DANIEL E DEL PORTO & CHERRYL A DEL PORTO	311.1	132.6	1,337.2	1,160.1	1,074.6	1,301.0	159.3		
108 N14 E25 10ADCC1	65264, 65265	IRR	LAWRENCE C. MASINI RANCH	170.5	105.7	1,310.1	1,268.0	1,297.0	305.3	163.2		
108 N14 E25 10ADDD1	68003	IRR	MASINI INVESTMENTS	22.4	3.9	403.2	661.1	127.8	0.1	0.0		
108 N14 E25 10CBBB1	58756	IRR	LAWRENCE C. MASINI RANCH	0.0	115.0	1,092.9	1,302.6	890.2	235.2	265.5		
108 N14 E25 10CCDD1	58752	IRR	LAWRENCE C. MASINI RANCH	340.4	41.2	1,290.5	1,477.5	1,243.6	1,865.3	1,899.6		
108 N14 E25 11ADCD1	68399, 68401	IRR	L & M FAMILY LIMITED PARTNERSHIP	145.2	1,184.5	686.5	678.3	122.0	4.0	38		
108 N14 E25 12AABA1	26311, 61575	IND	SPPC	3,421.3	3,203.4	4,098.2	3,814.1	3,116.7	2,348.1	2,827.7		
108 N14 E25 15ACBB1	58757, 58758, 58759	IRR	LAWRENCE C. MASINI RANCH	285.9	25.0	1,573.9	1,532.2	697.5	381.7	23.0		
108 N14 E25 15CDCC3	18925	IRR	BARBER, HARRIET H.	557.0	212.2	1,129.9	976.5	711.0	1,124.1	510.6		
108 N14 E25 16CDCB2	27929	IRR	UNITED STATES OF AMERICA IN TRUST FOR YE	978.8	1,004.1	2,043.7	1,330.4	1,397.2	1,534.9	1,541.1		
108 N14 E25 16DACA1	68055	IRR	CLARENCE J. MOREDA FAMILY TRUST							16.2	2	
108 N14 E25 16DDAB1	67947	IRR	JOHN & LEONA HEIMERMAN F. TRUST								16	
108 N14 E25 16DDCD1	18672	IRR	BALAAM, DONALD A. & OLGA M.	489.4	0.5	0.0	480.5	0.0	0.0	0.0		
108 N14 E25 16DDDA1	72637	IRR	HISKETT, CARL WILLIAM & PHILLIS ANN							22.0	2	
108 N14 E25 19AC 1	49424	STK	BLM							0.0	0.0	
108 N14 E25 19DDDD1	58527	MM	SINGATSE PEAK SERVICES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
108 N14 E25 20DDBB1	23356	IRR	LEMOS, JOELLEN				35.6	35.6			39	
108 N14 E25 21DBDD1	58174	IRR	CLIFF, DONALD A.	169.2	375.0	525.2	515.3	810.5	670.3	202.0		
108 N14 E25 25BDBA 1	18934	IRR	WILDLIFE DEPARTMENT-NEVADA	0.0	75.0	676.8	552.1	151.7	246.6	1.5		
108 N14 E25 25CABA1	70229, 70230, 71092	IRR	EWERT FAMILY 1995 TRUST	5.6	42.3	421.8	51.6	248.7	94.8	5.7		
108 N14 E25 25CC 1	58105	STK	EWERT FAMILY 1995 TRUST							0.0	0.0	
108 N14 E25 27ACCD1	57865	STK	THE DAVID M. LITTLE FAMILY TRUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
108 N14 E25 27ACDC1	57866, 57867	IRR	POLI, JOHN	169.5	244.2	770.4	915.0	613.2	765.4	133.5		
108 N14 E25 27BAAB1	30169	IRR	BARBER, HARRIET	335.2	13.0	1,122.8	1,155.7	455.8	285.9	23.8		
108 N14 E25 27BCDD1	60704	IRR	BARBER, HARRIET	170.4	0.0	1,266.4	1,395.0	974.7	151.0	205.0		
108 N14 E25 29ACAC1	23913	IRR	CIRONE, ALLEN W. & AMANDA J.							0.0	2	
108 N14 E25 29DCBB1	20698	IRR	MCCORMICK, HILDA T., ROBERT J.	7.3	0.1	0.1	0.0	0.0	1.6	0.0		
108 N14 E25 31DB 1	49425	STK	BLM							0.0	2	
108 N14 E25 33BA 1	57079	STK	FOUR G CORPORATION							0.5	2	
108 N14 E25 33CDCD1	67034	IRR	DESERT PEARL FARMS	61.0	5.3	397.6	78.4	0.0	0.0	0.0		
108 N14 E25 33CDCD2	67202, 67203	IRR	DESERT PEARL FARMS	480.2	92.6	1,168.0	489.6	73.2	0.0	0.0		
108 N14 E25 34CBCA2	18986	IRR	ARSENIO FAMILY TRUST	251.7	299.2	683.2	801.7	625.6	169.7	574.5		
108 N14 E26 07CBBA1	64605	QM	WILDLIFE DEPARTMENT-NEVADA								16	
108 N14 E26 13CC 1	46709	STK	DAVID F. STIX							0.0	4	
108 N14 E26 17CD 1	60562, 64609	REC	WILDLIFE DEPARTMENT-NEVADA	0.0	0.0	267.2	545.0	263.1	215.4	0.0		
108 N14 E26 18BACA1	79863T	IRR	WILDLIFE DIVISION-NEVADA	0.0	47.3	287.7	310.5				40	
108 N14 E26 18BACA2	60561, 64604	REC	WILDLIFE DEPARTMENT-NEVADA	1,248.8	176.9	185.0	209.0	324.3	33.6	593.1		
108 N14 E26 18BACD1	60560, 64607	REC	WILDLIFE DEPARTMENT-NEVADA	936.2	1,755.7	455.6	1,857.7	1,963.8	1,977.4	1,296.2		
108 N14 E26 18BBDA1	79863T	IRR	WILDLIFE DIVISION-NEVADA					153.2	0.0	21.4	40	
108 N14 E26 18BDCC1	60559, 64606, 64608	REC	WILDLIFE DEPARTMENT-NEVADA	839.9	958.4	136.2	1,257.4	1,170.8	664.1		41	
108 N14 E26 18BDCB1	50704	WLD	WILDLIFE DEPARTMENT-NEVADA	108.6	108.6	108.6	108.6	108.6	108.6		41	
108 N14 E26 18BDCB2	64646	QM	WILDLIFE DEPARTMENT-NEVADA	9.5	8.1	1.7	21.6	7.3	9.3	8.4		
108 N14 E26 18BDCB3	60559, 64606, 64608	REC	WILDLIFE DEPARTMENT-NEVADA						208.7	1,414.8	41	
108 N14 E26 18BDCB3	50704	WLD	WILDLIFE DEPARTMENT-NEVADA							108.6	41	
108 N14 E26 18CACB1	60558, 64611	REC	WILDLIFE DEPARTMENT-NEVADA	1,295.1	1,666.4	292.4	392.1	1,753.3	1,058.9	1,034.0		
108 N14 E26 18CACB1	60557, 64610	REC	WILDLIFE DEPARTMENT-NEVADA	1,092.4	912.2	234.6	1,725.3	372.3	1,509.6	1,196.2		
108 N14 E26 19CB 1	66112	COM	SUNRISE RANCH, LLC	13.0	13.0	29.2	18.2	22.9	22.9	14.3		
108 N14 E26 19CB 2	80920	COM	SUNRISE RANCH LLC	10.5	10.5	21.1	29.1	34.6	22.7	28.1		

HISTORICAL GROUNDWATER USE BY POINT OF DIVERSION												
UNIQUE IDENTIFIER	PERMITS	MOU	OWNER OF RECORD	DUTY USED 2005	DUTY USED 2006	DUTY USED 2007	DUTY USED 2008	DUTY USED 2009	DUTY USED 2010	DUTY USED 2011	NOTES	
108 N14 E26 19DD 1	31826	STK	AGUIAR, GEORGE B. & JANIEL M.						0.0	0.0	4	
108 N14 E26 20CDCC1	76181, 76182, 76301	IRR	DAVID M. LITTLE FAMILY TRUST AGREEMENT					96.2	0.0	51.6	42	
108 N14 E26 22AAAD1	16034, 30447, 68715, 73810, 73811, 73812	IRR	SUNRISE RANCH, LLC	413.6	46.9	117.0	382.1	325.5	737.9	706.6		
108 N14 E26 22BDCC2	29299	IRR	L & M FAMILY LIMITED PARTNERSHIP	852.4	742.9	654.1	840.6	640.3	832.5	371.4		
108 N14 E26 23CDCC1	47116	QM	HAMILTON, RUTH VIRGINIA	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
108 N14 E26 26BDDD1	15946, 66896	IRR	LAMBERT, VERNON & EVELYN	21.6	49.2	31.0	22.6	30.2	0.0	27.4		
108 N14 E26 26CCDD1	25916	IRR	HENRY, DALE E.	791.0	739.6	791.0	600.0	748.0	715.9	677.5		
108 N14 E26 29DCAA1	27839	IRR	RITTER, JOHN G. JR.	225.4	201.8	383.0	64.1	252.7	252.7	222.7		
108 N14 E26 30BCDD1	74228, 75048, 77719	IRR	MICA FARMS LLC	0.0	24.8	930.7	776.3	187.6	129.8	603.0		
108 N14 E26 31CA 1	18820	STK	AGUIAR, GEORGE B. & JANIEL M.						0.0	0.0	2	
108 N14 E26 31CDBC2	19599	IRR	AGUIAR, GEORGE B. & JANIEL M.	0.0	0.0	127.5	205.8	0.0	0.0	1.1		
108 N14 E26 31DCCCC2	18806	IRR	RITTER, JOHN G. JR.	48.8	39.9	1,247.3	1,052.8	785.7	406.8	0.0		
108 N14 E26 32ADCD2	19661, 27123	IRR	LANDOLT, JOSEPH G. & BEVERLY JANE	958.7	199.0	1,617.7	800.0	911.4	735.5	240.2		
108 N14 E26 32BCCC3	18712	IRR	GABLE, O.D.	163.4	190.9	473.2	358.4	444.8	381.8	535.5		
108 N14 E26 32BDDD2	19062	IRR	MANHA, JOSEPH	40.5	0.0	383.2	212.1	153.9	64.8	5.7		
108 N14 E26 32DCCB1	30990	IRR	THOMPSON, CLIFFORD A.	0.0	0.0	629.8	482.2	295.3	240.4	54.1		
108 N14 E26 33DDDC1	78492	COM	MASON VALLEY TRAP CLUB						1.2	43		
108 N14 E26 34ADAA1	57254	IRR	AMMONS, JAMES T. AND SUSAN R.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
108 N14 E26 34CDAAI	20369	IRR	EASTERBY, DAVID & CARMALETTA			24.7	30.2	124.4	0.0	0.0	15	
108 N14 E26 34DBDC1	30218	IRR	MICHAEL FARETTO FAMILY 1996 TRUST						1.0	1.1		
108 N14 E26 34DDAC1	74255	IRR	TPKW FAMILY LIMITED PARTNERSHIP								44	
108 N14 E26 35AD 1	17386	DOM	MCKENZIE, JOHN A.								32	
108 N14 E26 35BCAA1	48290	IRR	LEAVITT, BRIAN B. & KIM S.	10.2	90.5	74.5	74.5	69.8	43.8	58.1		
108 N15 E25 21CAAD1	45594	IND	BREAK-A-HEART, LLC			91.9		115.8	121.5	31.8	45	
108 N15 E25 21CAAD2	51100	IND	BREAK-A-HEART, LLC					0.0	0.0	0.0	1	
108 N15 E25 21DDDD1	61710	COM	MILLER, EDMUND A. & LINDA	1.5	1.5	1.5	1.5	1.5	1.5	1.5		
108 N15 E25 22CCBC1	61208	IND	J.R. BENTON CO. LLC	4.3	4.3	3.0	3.6	3.2	3.5	8.6		
108 N15 E25 22CCDC1	61207	IND	J.R. BENTON CO. LLC	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
108 N15 E25 28AD 1	16546	DOM	LARSON, LARS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	24	
108 N15 E25 31AA 1	52506	STK	EQUITY PRESERVATION, INC.	4.4	4.4	4.4	4.4	4.4	4.4	4.4		
108 N15 E25 31BA 1	43320	STK	CLARENCE J. MOREDA FAMILY TRUST	2.2	2.2	2.2	2.2	2.2	2.2	2.2		
108 N15 E25 32AADD3	19516	IRR	PALMER, ALFRED W.	1,857.2	1,803.3	2,022.9	1,837.6	1,132.1	1,095.4	795.6		
108 N15 E25 32ACCBI	79492	IRR	DESERT PEARL FARMS								46	
108 N15 E25 34ABDD1	58755, 65777, 65778, 65779	IRR	LAWRENCE C. MASINI RANCH	589.0	1,161.6	887.5	954.6	607.6	651.5	584.6		
108 N15 E25 34CCCC1	71553	IRR	LAWRENCE C. MASINI RANCH	161.7	520.0	735.6	812.0	574.7	487.7	306.2		
TOTALS				49,929.3	41,575.9	100,538.7	107,299.0	89,415.2	67,850.3	52,578.7		

HISTORICAL GROUNDWATER USE BY POINT OF DIVERSION

- ¹ no data 2005-2008
² no data 2005-2010
³ 108 N12 E25 03BCDC1 plugged in 11/2008; 108 N12 E25 03BCDC2 drilled in 10/2008
⁴ no data 2005-2009
⁵ Permit 18914 abrogated in 2006
⁶ 108 N12 E25 15DBAA1 plugged in 01/2008; 108 N12 E25 15DBAA2 drilled in 04/2007
⁷ drilled in 04/2008
⁸ permitted in 2008
⁹ replacement well drilled in 04/2008
¹⁰ drilled in 04/2008
¹¹ drilled in 10/2010
¹² permitted in 2008; no data 2008-2009
¹³ 108 N12 E26 06AACC1 plugged in 03/2006; 108 N12 E26 06AACC2 drilled 05/2000
¹⁴ well not drilled
¹⁵ no data 2005-2007
¹⁶ no data 2005-2011
¹⁷ permitted & drilled 10/2006
¹⁸ Yerington Broadway Well; Permits 65298, 65302, 65358, 69120, 69121, 71410, 71411, 78035, 78036, 78037
¹⁹ Yerington California Well
²⁰ drilled in 06/2006
²¹ Yerington Mountain View Well
²² no data 2005-2006
²³ Yerington Rio Vista Well
²⁴ no DOM well log found, estimate 1.0 AF DOM use
²⁵ drilled 10/2008; no data for 2009
²⁶ Yerington Mason Well
²⁷ two dwellings; one dwelling accounted for (1.0 AFA) in exempt domestic wells from well log database
²⁸ drilled in 03/2011
²⁹ no data 2009
³⁰ drilled 07/2007
³¹ 108 N13 E25 36DCAD1 plugged in 03/2006; 108 N13 E25 36DCAA1 redrilled 07/1995
³² dwelling accounted for (1.0 AFA) in exempt domestic wells from well log database
³³ plugged 10/2009
³⁴ 108 N13 E26 05DCBC1 plugged 03/2007; 108 N13 E26 05DCBC2 drilled in 02/2007
³⁵ permitted in 2008
³⁶ no 2005 or 2008 data
³⁷ drilled 09/2008; no data for 2008-2010
³⁸ no data 2005
³⁹ no data 2005-2008 & 2011
⁴⁰ 108 N14 E26 18BACA1 plugged 02/2009; redrill 108 N14 E26 18BBDA1 01/2009
⁴¹ 108 N14 E26 18BDCA1 plugged 10/2010; redrill 108 N14 E26 18BDCA3 10/2010
⁴² drilled 08/2008
⁴³ drilled 09/2009; no data 2011
⁴⁴ drilled 10/2008;
⁴⁵ no data 2005-2006 & 2008
⁴⁶ drilled 03/2011; no data 2011
⁴⁷ not drilled

APPENDIX D

MASON VALLEY HISTORICAL PUMPAGE BY MANNER OF USE

MASON VALLEY HISTORICAL UNDERGROUND IRRIGATION USE, SURFACE WATER CONSUMPTION AND EAST & WEST WALKER RIVER STREAMFLOWS

MASON VALLEY HISTORICAL PUMPAGE-TABLE

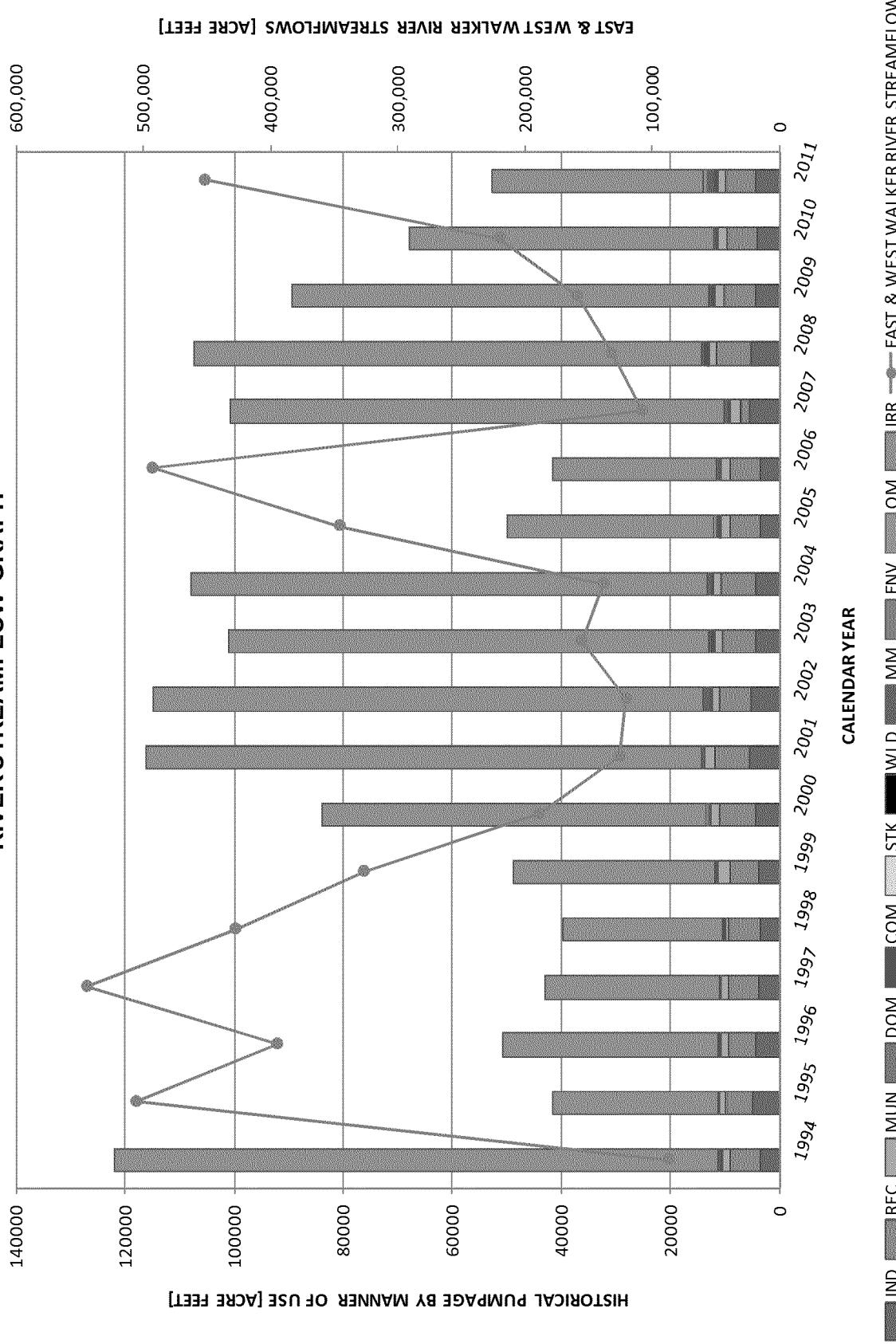
	1994	1995	1996	1997	1998	1999	2000	2001	2002
COM	242.3	259.8	339.2	239.1	308.4	280.7	308.5	225.2	493.9
DOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	3,439.6	4,756.6	4,199.3	3,548.6	3,324.3	3,694.4	4,161.7	5,374.8	4,992.6
IRR	110,731.9	30,180.1	39,608.9	32,018.0	29,369.1	37,104.8	70,627.3	101,747.3	100,917.3
MM	490.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	764.0
MUN	1,392.0	1,136.1	1,570.6	1,201.8	575.6	2,215.5	1,561.4	2,023.3	1,384.0
QM	19.1	13.5	11.5	14.6	11.7	12.0	304.3	305.3	305.6
REC	5,463.5	4,950.9	4,910.2	5,746.4	5,884.8	5,337.0	6,741.4	6,186.1	5,773.3
STK	112.7	11.4	15.1	0.7	28.3	61.2	33.1	33.7	33.9
WLD	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6
DOM**	625.0	665.0	686.0	710.0	716.0	730.0	740.0	751.0	763.0
TOTALS	122,625	42,082	51,449	43,588	40,327	49,544	84,586	116,755	115,536

	2003	2004	2005	2006	2007	2008	2009	2010	2011
COM	585.7	586.1	724.1	450.9	639.7	728.5	636.6	595.4	757.1
DOM	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
ENV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IND	4,218.9	4,171.9	3,452.7	3,395.5	5,261.8	5,184.4	4,243.4	3,862.7	4,252.5
IRR	88,040.3	94,776.2	38,052.5	30,111.1	90,467.8	93,106.5	76,579.7	55,761.3	38,685.1
MM	132.2	141.3	0.0	0.0	99.7	72.8	146.1	152.8	1,017.9
MUN	1,442.5	1,238.9	1,490.2	1,495.0	1,725.3	1,590.8	1,594.3	1,496.4	1,375.3
QM	295.0	292.8	453.4	327.0	379.0	328.8	149.6	149.9	787.3
REC	6,088.9	6,423.6	5,599.1	5,639.1	1,808.1	6,129.9	5,898.3	5,669.7	5,536.2
STK	23.8	22.9	43.7	43.7	43.7	43.7	53.6	48.5	53.7
WLD	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6
DOM**	776.0	786.0	788.0	799.0	815.0	826.0	831.0	832.0	814.0
TOTALS	101,712	108,548	50,717	42,375	101,354	108,125	90,246	68,682	53,393

*During the 1994 - 2004 period, use monitoring was mostly limited to larger users/wells

**Exempt domestic well (NRS 534.013) use estimate

MASONVALLEY HISTORICAL PUMPAGE BY MANNER OF USE & EAST & WEST WALKER RIVER STREAMFLOW-GRAFH



ATTACHMENT 1

METRIC Analysis of Agricultural Evapotranspiration Summary of Findings Mason Valley, Nevada 2010-2011



NEVADA DIVISION OF WATER RESOURCES 2011 MASON VALLEY GROUNDWATER PUMPPAGE INVENTORY

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Overview

This attachment to the 2011 Mason Valley Groundwater Pumpage Inventory presents findings of an analysis conducted by NDWR to quantify actual evapotranspiration (ET) from agricultural fields for 2010 and 2011. ET data presented here was computed using METRIC (Mapping Evapotranspiration at High Resolution with Internalized Calibration). METRIC calculates ET as the residual of the surface energy balance using satellite imagery, calibrated using ground-based reference ET from weather stations (Allen et al, 2007).

This work was funded by a grant from the National Fish and Wildlife Foundation as part of the Walker Basin Restoration Program. The purpose of the METRIC analysis is to document water use and water consumption reductions in response to lease and buyout programs supported by the Walker Basin Restoration Program. No lease or buyout agreements were finalized in 2010-2011, so this report provides a baseline for crop water use in Mason Valley. NDWR is funded through September 2014 to continue METRIC analysis in the Walker River Basin.

Methods

Reflectance data from Landsat 5 and Landsat 7 were used to run METRIC for this analysis. Mason Valley is within Landsat paths 42 and 43, row 33. A total of 19 scenes were used for 2010 and 20 scenes were used for 2011. Pixel size is 30m x 30m. This degree of spatial precision allows for quantification of ET at the field-scale.

Cloud-free Landsat satellite images were not available for every month, so the analyses reported here are for time periods when cloud cover was absent and may not represent the ET for the entire growing season. Analysis only included agricultural areas, excluding riparian corridors and other areas of natural vegetation.

Ground weather data for this analysis was recorded by the Mason Valley NICEnet weather station. NICEnet is comprised of several weather stations in agricultural settings throughout Nevada. The stations are maintained by the Desert Research Institute and data are available to the public. Data include temperature, wind, solar radiation and precipitation at 10-minute intervals. Raw weather data were closely reviewed by NDWR for instrument error.

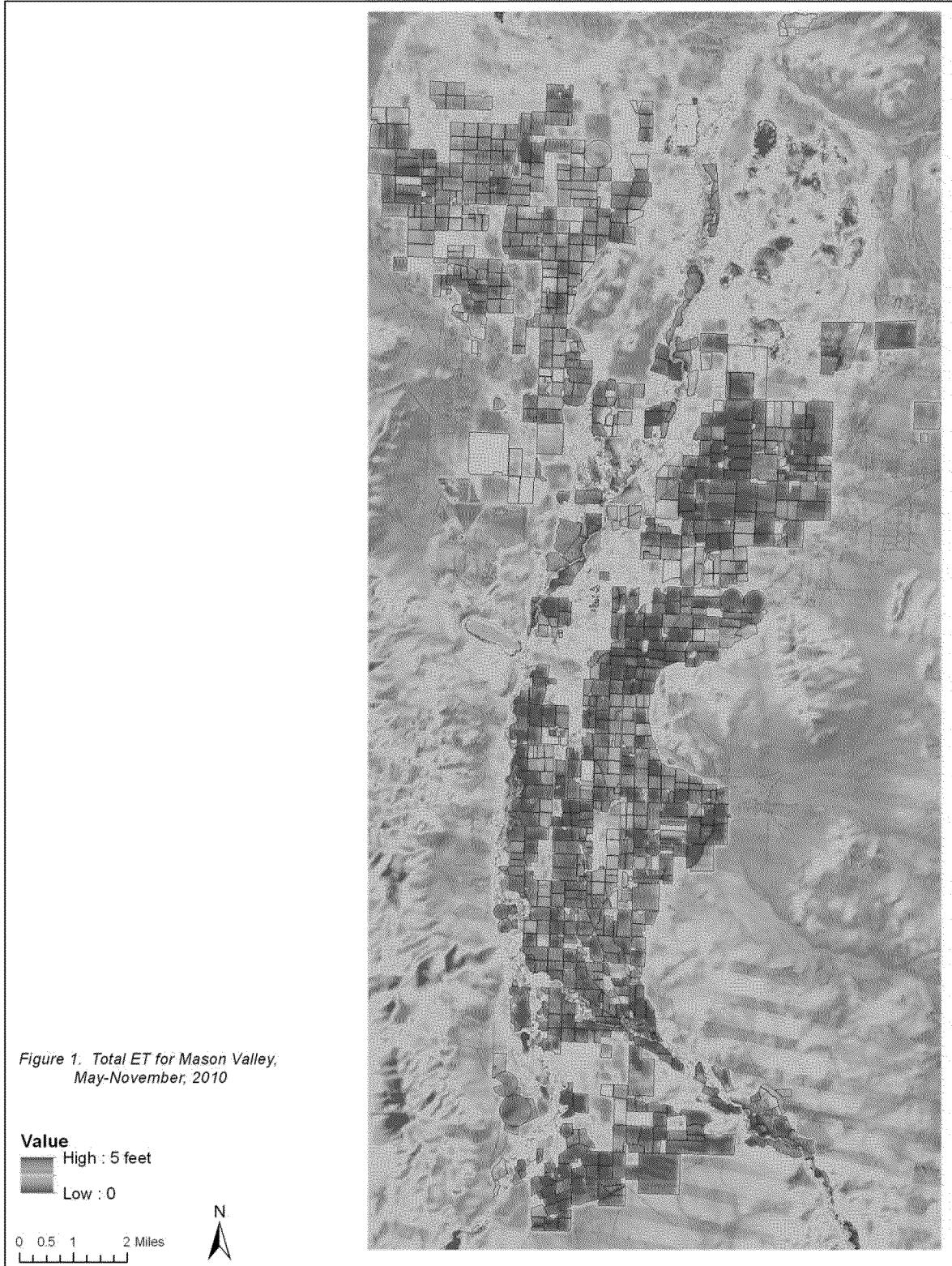
METRIC models were run using code developed by the Desert Research Institute for ArcGIS 10.0. Alfalfa-based reference ET was computed using RefET v. 3.1.05. Results generated are field-scale and pixel-scale monthly totals of ET for the months May through November, 2010 and April through October, 2011.

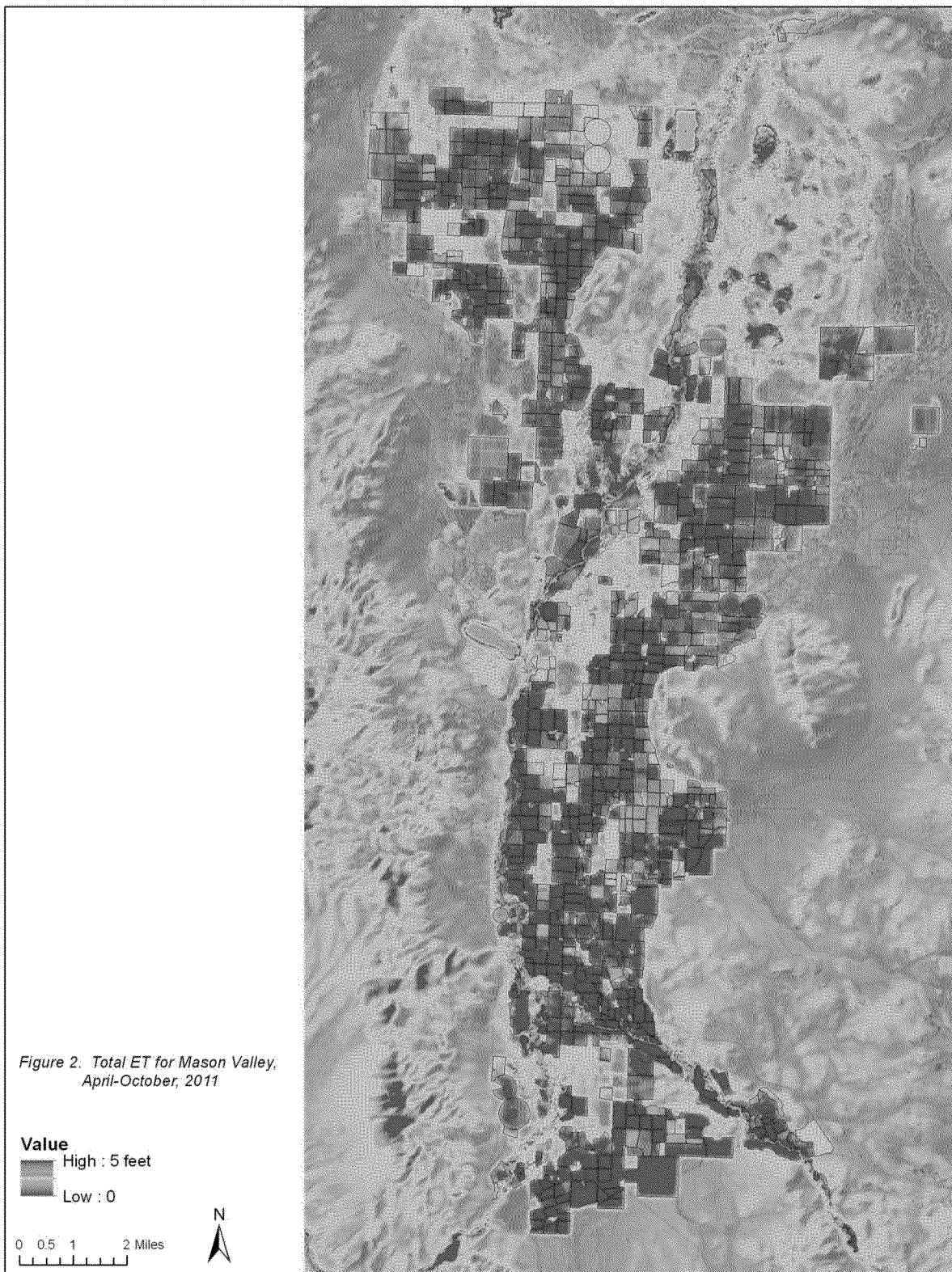
This report estimates water use by crops for the stated periods and does not consider the source of the water. METRIC analyses cannot distinguish ground water pumpage from surface water diversions. Findings are not directly comparable to other results presented in the 2011 Mason Valley Groundwater Pumpage Inventory.

Results

Total ET from Agricultural Fields

Cumulative ET computed by METRIC is shown on Figure 1 for 2010 and Figure 2 for 2011. Agricultural fields used for this analysis are delineated with a fine black border. Each figure demonstrates ET variation within the valley. The two figures span a different series of months, representing the total time period that METRIC results were generated for the two years.





Histograms of total ET by acreage are shown in Figure 3 for 2010 and Figure 4 for 2011. Data are normalized to the period May-October for each year. This sequence of months approximates the growing season, and allows for a consistent measure between the two years. Mean May-October ET was 2.7 feet in 2010 and 2.8 feet in 2011.

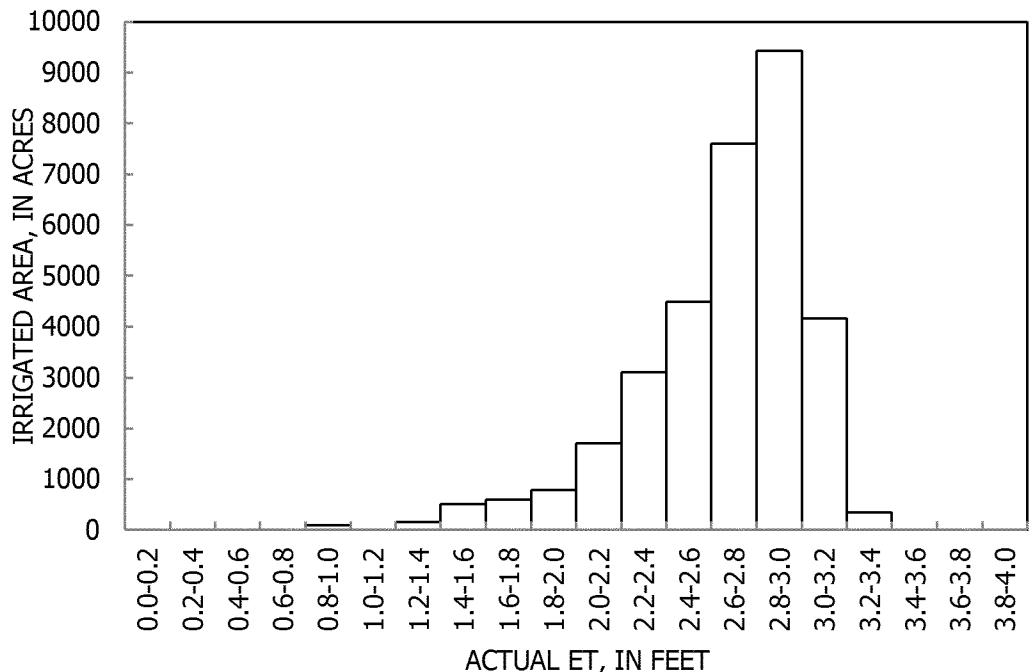


Figure 3. Mason Valley Agricultural ET, May-October 2010.

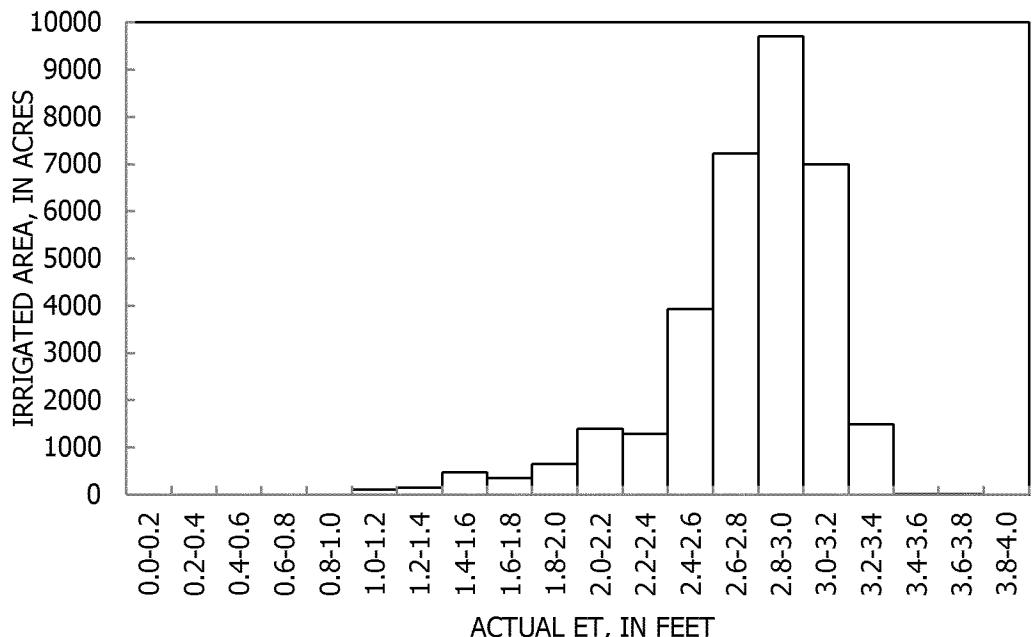


Figure 4. Mason Valley Agricultural ET, May-October 2011.

Monthly agricultural ET in Mason Valley is shown in Tables 1 and 2 . Total ET depths are averaged over all agricultural pixels in the valley. Precipitation was recorded at the Mason Valley NICEnet weather station. Net ET is the difference between total ET and precipitation , providing an estimate of monthly irrigation. The assumptions in estimating Net ET are that all precipitation is transpired by crops or evaporated from the surface, and that there is no undercatch at the precipitation gage.

2010	Total ET (ft)	P (ft)	Net ET (ft)
May	0.44	0.01	0.43
June	0.50	0.00	0.50
July	0.61	0.00	0.61
August	0.51	0.00	0.51
September	0.37	0.00	0.37
October	0.22	0.13	0.09
November	0.13	0.01	0.11

Table 1. Monthly ET in Mason Valley, May-November 2010.

2011	Total ET (ft)	P (ft)	Net ET (ft)
April	0.25	0.00	0.24
May	0.46	0.02	0.44
June	0.56	0.05	0.50
July	0.60	0.02	0.58
August	0.52	0.00	0.52
September	0.39	0.01	0.38
October	0.22	0.01	0.21

Table 2. Monthly ET in Mason Valley, April-October 2011.

ET by Crop

Total ET by crop is shown in Table 3 . Data presented is for the months May -October for both 2010 and 2011. ET rates were averaged over cumulative irrigated acreage. Crop inventories were completed by NDWR staff in 2010 and 2011.

	2010		2011	
	Irrigated Acres	May-October ET, in feet	Irrigated Acres	May-October ET, in feet
Alfalfa	23,498	2.7	22,689	2.9
Onions	3,811	2.4	3,240	2.6
Grain	835	2.3	2,382	2.4
Grass	1,629	2.5	1,424	2.7
Pasture	1,179	2.4	1,124	2.6
Corn	766	2.5	990	2.8
Oats	246	2.2	709	2.6
Lettuce	277	2.1	494	2.0
Garlic	213	2.3	269	2.2
Spinach	341	2.2	248	1.7
Turf	165	2.7	101	2.9
Broccoli	--	--	52	2.3
Clover	--	--	43	2.4
Pumpkins	16	1.8	--	--
Wine Grapes	3	1.4	3	1.3
Total	32,979	2.7	33,767	2.8

Table 3: Mason Valley Crop Evapotranspiration, May-October 2010-2011.

ET by Diversion Source

Table 4 shows Mason Valley ET by irrigation ditch service areas . These results are for total ET from agricultural lands within each area, originating from both Walker River surface water diversions and supplemental pumpage . Fields irrigated by stand-alone groundwater rights are identified on Table 4 as a unique source category. Walker River diversion mapping for the period 2010-2011 was provided by the Desert Research Institute (Figure 5).

Source	Irrigated Acres	2010		2011	
		Total ET, in acre-feet	Average ET, in feet	Total ET, in acre-feet	Average ET, in feet
Baker Snyder	339	970	2.9	980	2.9
Campbell	5,537	13,539	2.4	15,084	2.7
D&GW	591	1,671	2.8	1,776	2.9
East Fork	35	102	2.9	103	3.0
Fox	3,098	8,581	2.8	8,764	2.8
Greenwood	1,800	4,857	2.7	5,045	2.8
Groundwater	1,345	3,520	2.6	3,826	2.5
Hall	2,543	6,868	2.7	7,024	2.7
High	648	1,876	2.9	1,815	2.9
Hilbun	417	1,159	2.8	873	3.1
Joggles	908	2,305	2.5	2,897	2.6
Kelly Alkali	178	518	2.9	539	2.9
Lee & Sanders	61	127	2.1	140	2.3
Mickey	1,550	4,274	2.8	4,290	2.9
Nelson	149	457	3.1	479	3.2
Nichol Merritt	4,683	12,582	2.7	12,157	2.8
Pitchfork East	475	1,179	2.5	1,551	2.5
Pitchfork West	211	605	2.9	649	3.1
River Pump AGHD	41	116	2.8	164	1.9
River Pump Borsini	93	257	2.8	184	2.5
River Pump CBN	339	921	2.7	1,125	2.8
River Pump Stanley	102	193	1.9	118	1.2
River Pump Warburton	5	12	2.4	22	2.4
Sab	795	2,110	2.7	2,361	2.9
Spragg Woodcock	945	2,336	2.5	2,410	2.5
Tunnel	2,411	6,847	2.8	7,897	3.0
West Hyland	3,307	8,460	2.6	9,749	2.6
Westside	375	1,000	2.7	882	2.6
Total		87,440		92,906	

Table 4: Mason Valley Agricultural Evapotranspiration by Source, May-October 2010 and 2011.

*Figure 5. Irrigated Fields by Diversion Source, Mason Valley,
2010-2011*



Citations

Allen, Richard G., Masahiro Tasumi, and Ricardo Trezza, 2007. Satellite-Based Energy Balance for Mapping Evapotranspiration with Internalized Calibration (METRIC) -Model. Journal of Irrigation and Drainage Engineering Vol. 133, No. 4, August 1, 2007.

Allen, Richard G., Ref-ET version 3.1.05. Reference Evapotranspiration Calculator for Support of ASCE Manual 70 (1990) and 2005 ASCE Standardizations and FAO Irrigation and Drainage Paper No. 56: Crop Evapotranspiration, University of Idaho, 2008.

Desert Research Institute, Nevada Integrated Climate and Evapotranspiration Network, online at nicenet.dri.edu